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GRADUATE CATALOG 1983-1985

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University of New Haven

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GRADUATE SCHOOL CATALOG 1983-85

300 Orange Avenue
West Haven, Conn. 06516
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This catalog supersedes all previous bulletins, catalogs and brochures published by the Graduate School and describes academic programs to be offered beginning in fall 1983. Graduate students admitted to the university for the fall of 1983 and thereafter are bound by the regulations published in this catalog.

The University of New Haven is committed to affirmative action and to a policy which provides for equal opportunity in employment, advancement, admission, educational opportunity and administration of financial aid to all persons on the basis of individual merit. This policy is administered without regard to race, color, national origin, age, sex, religion or disabilities not related to performance. It is the policy of the University of New Haven not to discriminate on the basis of sex in its admission, educational programs, activities or employment policies as required by Title IX of the 1972 Educational Amendments. This school is authorized under federal law to enroll non-immigrant alien students.

Inquiries regarding affirmative action, equal opportunity and Title IX may be directed to the director of equal opportunity.

The male generic terms appearing throughout this book refer to both males and females and are used for grammatical simplicity and semantic convenience.

The university reserves the right, at any time, to make whatever changes may be deemed necessary in admission requirements, fees, charges, tuition, regulations and academic programs prior to the start of any class, term, semester, trimester or session.

Every effort has been made to ensure that the information contained in this publication is accurate and current; however, the university cannot be held responsible for typographical errors or omissions that may have occurred.

Volume VI. No. 8 May 1983

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ACADEMIC PROGRAMS

Accounting
Business Administration (M.B.A.)
Business Administration/Public Administration dual degree
Business Administration/Industrial Engineering dual degree
Community Psychology
Computer and Information Science
Criminal Justice
Electrical Engineering
Environmental Engineering
Environmental Science
Executive M.B.A.
Forensic Science
Gerontology
Humanities
Industrial Engineering
Industrial/Organizational Psychology
Industrial Relations
Legal Studies
Mechanical Engineering
Occupational Safety and Health Management
Operations Research
Public Administration (M.P.A.)
Taxation

Senior Professional Certificates

Accounting (3 options)
Applications of Psychology
Computer Applications & Information Systems
Dietetics Administration
Economic Forecasting
Finance
General Management
Gerontology
Hotel & Restaurant Administration
Human Resources Management
International Business
Marketing (2 options)
Media in Business
Public Management (3 options)
Quantitative Analysis
Taxation (2 options)

Professional Certificates

Advanced Investigation (Forensic Science)
Criminalistics (Forensic Science)
Fire Science (Forensic Science)
Security Management (Criminal Justice)

CALENDAR
1983-1984

Summer Term 1983	**Monday, July 11 – Thursday, Aug. 25**	
	Fall term deadline for receipt of completed application and supporting materials*	**Wednesday, June 1**
Fall Term 1983	**Saturday, Sept. 10 – Saturday, Dec. 17**	
	Last day to register	**Friday, Aug. 26**
	Holiday, no classes	**Saturday, Sept. 17**
	Last day to add a class	**Monday, Sept. 19**
	Winter term deadline for receipt of completed application and supporting materials*	**Saturday, Oct. 1**
	Holiday (Columbus Day), no classes	**Monday, Oct. 10**
	Last day to petition for January graduation	**Friday, Oct. 14**
	Holiday (Thanksgiving), no classes	**Tuesday, Nov. 22 – Saturday, Nov. 26**
	Commencement	**Sunday, Jan. 22**
Winter Term 1984	**Tuesday, Jan. 3 – Saturday, Mar. 31**	
	Last day to register	**Friday, Dec. 16**
	Spring term deadline for completed application and supporting materials*	**Sunday, Jan. 1**
	Last day to add a class	**Monday, Jan. 16**
	Holiday (President's Day), Classes meet Saturday, Feb. 25, at 1 p.m.	**Monday, Feb. 20**
	Last day to petition for June graduation	**Thursday, Mar. 1**
	Commencement	**Sunday, June 10**
Spring Term 1984	**Wednesday, April 4 – July 3**	
	Last day to register	**Friday, Mar. 23**
	Last day to add a class	**Tuesday, April 17**
	Holiday (Memorial Day), Classes meet Saturday, June 2, at 1 p.m.	**Monday, May 28**

*Prospective students who complete their application after this date may register for one term as non-matriculated in-process students. This registration does not guarantee acceptance.

International students are not eligible for in-process registration because of immigration applications and should submit completed applications and all supporting materials well in advance of these deadlines.

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THE GRADUATE SCHOOL

The Graduate School of the University of New Haven offers master's degrees in 23 program areas at eight locations throughout Connecticut.

The main campus in West Haven offers all academic programs, and off-campus centers at Waterbury, Danbury, Trumbull, Middletown, Wallingford, Groton-New London and Clinton offer courses leading to master's degrees in business administration, computer and information science and other programs.

Most Graduate School courses are scheduled during the late afternoon, early evenings and on Saturdays to meet the needs of part-time, employed students.

The University of New Haven is fully accredited by the New England Association of Schools and Colleges. It is also a member of the Council of Graduate Schools, the Northeastern Association of Graduate Schools, the Academy of Criminal Justice Sciences, and the National Association of Schools of Public Affairs and Administration.

Admission

General Requirements

Applicants to the University of New Haven Graduate School are required to have an undergraduate degree from an accredited institution. Certain programs have additional requirements for admission to specific curricula, details of which are included in the program listings later in the catalog.

Admission decisions are based primarily on an applicant's undergraduate record. Prospective students who are currently completing their undergraduate study should submit an official transcript complete to the date of application. In most cases, an admission decision will be made on the basis of the partial transcript, contingent upon completion of the baccalaureate degree. Registration will not be permitted until a final, official transcript is submitted to the Graduate School admissions office.

In support of an application, students may submit their scores from the Graduate Record Examination (GRE), both the Aptitude Test and the Advanced Test, the Graduate Management Admission Test (GMAT) or the Miller Analogies Test. Students may be required to take one or more of these tests.

Procedure

An applicant for admission to the Graduate School must submit a formal application, two letters of recommendation, complete official transcripts of all previous college work and the nonrefundable application fee.

Students may be admitted for any term. Should a student be unable to enter the Graduate School during the term for which admission is granted, the acceptance will remain open for one calendar year. After one year, a new application for admission will be required.

Admission Categories

Applicants and students in the Graduate School are assigned to one of three categories: fully matriculated, provisional or special.

Fully Matriculated

Students accepted for entrance into a regular degree program are fully matriculated students.

Provisional

Applicants whose undergraduate average falls below the standard set for full matriculation may be accepted provisionally. Students accepted provisionally should seek out the advice of their coordinator or advisor so that their graduate work can be closely supervised.

Students must complete the work stipulated in their provisional acceptance before they will be evaluated for admission as fully matriculated graduate students.

Special

Special student status is reserved for students who do not wish to matriculate in a program. Registration is limited to 12 credit hours of graduate work. Should the student desire to continue graduate work, he or she must be accepted into a specific graduate program. Special students are responsible for seeing to it that prerequisite requirements for the courses they wish to take are met.

Students who wish to matriculate in a degree program, but complete their applications after the stated deadline, should register as *in-process* students to take advantage of advisement in their fields of study. These students should not apply for *special student* status.

Auditors

An auditor is allowed to attend class and is expected to participate in class discussions and complete the required assignments. An auditor receives no grade or credit toward any degree. Auditor status does not imply admission to any of the graduate degree programs. Both registered students and nonstudents are eligible to audit University of New Haven Graduate School courses.

Admission of International Students

Qualified international students are welcome as students in the Graduate School of the University of New Haven.

The major criterion for the admission of international students is the same as that used for citizens of the United States: Does the undergraduate preparation of the student qualify him or her for graduate study in a degree program at the University of New Haven? Since institutions and systems of higher education vary from country to country, the international applicant may expect that he or she will be asked to provide substantiation, not only of the courses taken and grades received, but also of the academic reputation of the undergraduate school within the educational system of the particular country. All transcripts must be provided in English.

In addition, the Graduate School requires that the applicant submit evidence of English proficiency. The Test of English as a Foreign Language (TOEFL) examination is recommended, but if undergraduate work has been completed in English or if arrangements for the TOEFL are difficult, the GRE or GMAT examinations may be substituted for the TOEFL. The Graduate School may also require that evidence of English proficiency be ascertained by an overseas interview, any charge for which must be borne by the prospective student.

Every international applicant will be evaluated carefully regarding undergraduate subject matter mastery and English proficiency. A student whose examination score falls below acceptable standards for English proficiency (which in the case of the TOEFL examination is 500-550) or whose undergraduate work does not provide necessary preparation for the particular program of study chosen in the Graduate School, may be admitted subject to the requirement that the course of study at the University of New Haven include intensive work in English and undergraduate courses, for which no graduate credit will be given.

International applicants for degree programs which require a thesis will be evaluated for English language writing skills. Further courses in writing skill development may be required.

International students will need to provide a signed financial resource statement together with a $100 refundable deposit or a current official scholarship letter prior to the issuance of the I-20, since the university must certify the international student's finances. The University of New Haven does not offer financial assistance to international students.

International students are required to pay a one-time international student fee of $200 and the tuition for one trimester, usually meaning the tuition for three, three-credit courses when they register.

International students are required to have medical insurance, and may elect to purchase the university's student policy if they wish.

Since the review of applications from international students takes much longer than those from citizens of the United States, it is important that applications and all supporting materials be received by the Graduate School well before the stated deadline in the academic calendar.

U.S. immigration regulations require that students holding a student visa maintain adequate progress. Adequate progress means full-time study, which is generally interpreted to mean taking at least three courses each term, although in certain programs may be less than three. Prospective international students should, therefore, note that not all graduate programs are designed to permit full-time study. A complete listing of such programs is provided on page 14.

The English Language Institute (ELI) at the university offers a wide selection of courses in English language skills, as well as a college skills workshop for qualified international students.

Upon acceptance students are invited to contact the director of housing for assistance in locating living accommodations.

The university maintains an international student advisor's office on a full-time basis. Upon their arrival at UNH, all international students must contact the director of that office within 72 hours.

Graduate students studying under an F-1 visa are allowed 24 months to complete a degree program. All F-1 visa students must register for full-time study. Once visa students have completed their degree

program, the International Student Office will not issue an I-538 for extension of temporary stay, except for periods of practical training approved by the Graduate School and the U.S. Office of Immigration.

Registration

Registration deadlines are listed in the graduate calendar and in the class schedules that are published each term. Returning students and new students who have been admitted to programs will receive registration materials and can register by mail. Some departments have other procedures and will notify the students involved directly.

Prospective students who complete their applications after the stated deadline may register as *in-process* students. They will not receive registration materials in the mail but may register in person at the main campus or at an off-campus center. Proof that the in-process student has an undergraduate degree will be required at the time of registration, and, whenever possible, unofficial transcripts of previous course work should be provided to facilitate advisement. In-process status remains in effect for a maximum of one term, and in-process students may register for no more than six credits' work without the approval of the coordinator of the program for which they are applying.

It is the responsibility of in-process students to see to it that all materials in support of their application are received by the university in time for a matriculation decision before the next term. In-process students will not be permitted to register a second time until a matriculation decision has been made. Acceptance as an in-process student does not guarantee admission to the Graduate School.

Any student who fails to register for three consecutive terms will no longer receive registration materials. It will be the responsibility of the student to notify the Graduate Records Office of his or her desire to continue graduate study. Files for students who revert to an inactive status will be retained for two years. At the end of that period, those files will be destroyed.

No add slips will be accepted after the first week of class. A student may withdraw from a course any time prior to the last scheduled class meeting. Course additions or withdrawals may be handled in person or by mail.

The university reserves the right to change class schedules or instructors at any time. It further reserves the right to cancel any course, and, in such cases, will refund full tuition to the students.

Students with an outstanding balance will not be permitted to register. Current students who register after the registration deadline will be assessed a late registration fee.

Academic Policies

Academic Counseling

It is the student's responsibility to select courses in accordance with prerequisites, the advisor's recommendations, the departmental plan of study (if required) and the requirements for the degree.

Students needing further explanation about program requirements or course sequencing should request academic advisement. Appointments for academic counseling should be scheduled through

department chairmen or program coordinators. Off-campus advisement evenings are held prior to each trimester.

A student is not required to file a formal plan of study with the Graduate School. It is the student's responsibility to meet the stated requirements for the degree.

Academic Standards

The academic standing of each student is determined on the basis of the quality point ratio earned each term.

To determine a quality point, each letter grade earned during a term is assigned a quality point value:

A — Four quality points
B — Three quality points
C — Two quality points
F — Zero quality points
P — Zero quality points
S — Zero quality points
U — Zero quality points
W — Zero quality points
I — Zero quality points
T — Zero quality points

The quality point ratio is obtained by multiplying the quality point value of each grade by the number of semester hours assigned to each course in the catalog, then dividing the total quality points carried by the total semester hours attempted.

A cumulative quality point ratio is obtained by calculating the quality point ratio for all courses attempted at the University of New Haven.

Awarding of Degrees

The University of New Haven awards degrees twice a year, at commencements in January and in June.

A quality point ratio of 3.0 is required for graduation. Students completing the requirements for a degree at the end of the fall term will receive the degree in January. Students completing the requirements for a degree at the end of the winter term will receive the degree at the June commencement. Students completing the requirements for a degree at the end of the spring term will receive the degree the following January. Students completing the requirements for a degree in July will receive a formal statement that they have completed all requirements for the degree and will formally be awarded their diploma in January.

M.B.A. students who have C's in more than three courses will not be allowed to graduate. Instead, they will be advised to repeat one or more of those courses and must achieve a grade of B or better.

Candidates for January commencement must file a petition with the Graduate Records Office no later than October 15, and for June commencement no later than March 1. Forms for this purpose are available in the Graduate School Office and in the Office of the Registrar. Payment of the graduation fee must accompany the petition.

Should a candidate not fulfill all the requirements for graduation before the deadline after having filed the petition to graduate and paid the fee, the student will have to petition again at a later date. At that time, only the refiling fee will be charged.

All financial obligations to the university must be met prior to graduation.

Full-Time Study

A full-time graduate course of study is defined as three courses per term. Under unusual circumstances, the department chairperson, the program coordinator and the Graduate School could approve a reduction in credits.

Full-time enrollment is possible in the following programs: accounting, business administration, community psychology, computer and information science, criminal justice, electrical engineering, environmental engineering, environmental science, forensic science, gerontology, industrial engineering, industrial/organizational psychology, industrial relations, mechanical engineering, occupational safety and health management, operations research, public administration, taxation, and the M.B.A./industrial engineering and M.B.A./M.P.A. dual degrees.

Grade Reports

Reports of the final grade in each subject will be mailed to the student soon after the close of each term.

Grading System

The Graduate School uses the following grading system:

A — Superior performance
B — Good performance
C — Passing performance
F — Failure
P — Pass – carries credit hours toward the degree
S — Satisfactory performance in a non-credit course
W — Withdrawal from a course
I — Incomplete – given on rare occasions. A grade of **I** that is not changed within one calendar year automatically reverts to a **W**.
T — Used for thesis/seminar project students who have not completed work during the term in which they originally registered for the course. Students must complete their work within the maximum allowable time for graduate work.
U — Unsatisfactory performance in a non-credit course

Some employers require that a letter grade be awarded if a student is to receive tuition reimbursement. It is the student's responsibility to inform the faculty member of his or her need for a letter grade.

Graduate School Ethics

It is Graduate School policy that all students are expected to complete all course requirements on their own initiative and endeavor, with no collaboration unless specifically authorized by an instructor. In addition, material used by students but authored by another individual, publisher, company, government or organization shall be identified as such by appropriate footnotes or references. Violations of this policy, either in fact or in spirit, will normally be handled by the faculty member involved though they may be grounds for dismissal from the Graduate School. Students wishing to appeal the decision of a faculty member should contact the Graduate School Office.

It is the responsibility of the student to meet all classes and take all exams on schedule. Faculty have the right to require a standard of attendance, even if it conflicts with professional and job-related responsibilities of students. Students whose jobs require that they be absent from class must realize that it is their responsibility to determine whether such absence is permitted by the faculty member involved, and to meet their professor's requirements for making up missed work, if the professor allows missed time to be made up.

Professors may assess a make-up examination fee when a student is permitted to take an end-of-term examination at a time other than the scheduled time except for conflicts caused by the examination schedule.

A make-up test fee is assessed when a student is permitted to make up an announced test during the term. Both these fees are paid at the Business Office.

Grievance Procedure

A formal policy for the handling of student grievances is available in the Graduate School Office.

Probation and Appeals

Any graduate student whose cumulative quality point ratio (QPR) is below 3.0, a **B** average, will be considered to be on academic probation, and may be required to obtain permission from the program coordinator before registering for additional course work. A student whose cumulative QPR is below 2.7 after completion of 24 credits will be required to withdraw from the Graduate School.

Appeals concerning directed withdrawal from the Graduate School under these circumstances should be directed to the dean of the Graduate School, who will in turn refer the appeal to the department chairman and/or the responsible administrative unit.

Repetition of Work

A student may repeat a course, with the new grade superseding the old grade in the computation of the quality point ratio. The original grade remains on the transcript.

Research Projects, Seminar Projects, and Independent Study

Some departments and academic programs require the completion of research projects, seminar projects, or independent study rather than theses. In these cases, as with a thesis, students must have the written approval of their advisors and department chairmen prior to enrolling. This is accomplished by completing the form, *Proposal for Research Projects, Seminar Projects or Independent Studies*, and securing required approvals.

Students preparing a research project, seminar project, or independent study should follow the guidelines presented in the *Manual for the Preparation of Graduate Theses and Seminar Projects*, copies of which are available in the office of the Graduate School.

Residency Requirements

Degree programs have a 30-graduate-credit residency requirement, with the exception of the M.B.A./M.S.I.E. and M.B.A./M.P.A. dual degree programs which have a 60-graduate-credit residency requirement. Credits toward the residency requirements may be earned at the main campus or at the off-campus centers. Students taking classes off-campus are reminded that the Graduate School strongly encourages, and scheduling limitations frequently require, that you plan on taking at least three courses at the main campus.

Thesis

A number of preliminary steps are required before registration for thesis will be accepted by the graduate registrar. The student completes the form, *Proposal for Theses*, in which the proposed subject, the methodology and the hypothesis are described. The student secures the approval signature of a faculty member who will serve as advisor. The student must also secure the approval of the proposed thesis and the thesis advisor by the program coordinator and the dean of the Graduate School. Only after the graduate registrar has received the signed proposal form will the student be permitted to register for thesis.

A thesis will carry no fewer than six academic credits taken over no fewer than two academic terms. A preliminary draft must be presented to the advisor at least 45 days prior to commencement. Upon approval by the advisor and program coordinator, two final, unbound copies are presented to the Graduate School at least three weeks before commencement. A thesis must be defended before student's thesis committee and the dean of the Graduate School. After the dean of the Graduate School approves the thesis, credit is awarded and the thesis is deposited in the university library for binding and becomes part of the permanent collection. Additional copies may be required by the advisor or the program coordinator.

For guidance in the preparation of theses, graduate students should consult *A Manual for the Preparation of Graduate Theses and Technical Projects*, copies of which are available in the Graduate School Office. Questions not resolved by the instructions should be settled in consultation with the advisor and by reference to a standard style manual. The Graduate School participates in the University Microfilm Masters Program, and outstanding theses will be awarded this recognition upon the recommendation of the advisor, the program coordinator, or both.

Time Limit for Completion of Degree

Students must complete all the requirements for their degree within five years of the date of their initial matriculation in the program. Any extension of the time limit can be granted only by the dean of the Graduate School after consultation with the appropriate program coordinator.

Transfer Credit

Transfer credit may be given for graduate courses taken at other accredited institutions subject to the following conditions:

a. the courses were at the graduate level;
b. each grade was **B** or better; and
c. the courses did not fulfill requirements for any other degree already earned by the student.

Graduate students at the university must secure written approval before taking courses at another institution if they plan to transfer that credit into their UNH program. Course coordination forms are available in the Graduate School office for this purpose.

Waiver of Courses

Some programs permit waivers of core courses on the basis of undergraduate courses taken at accredited institutions. Waivers of elective courses are not permitted, nor are waivers based upon experience. In such cases, substitution of a more advanced course may be allowed.

For a course to be waived, a student must first secure the written approval of the department chairman or a faculty member acting for the department chairman in the department in which the waiver is requested.

Tuition and Fees

The following are the University of New Haven tuition, fees and charges which will be effective for the Fall 1983 term. The university reserves the right, at any time, to make whatever changes may be deemed necessary in admission requirements, fees, charges, tuition, regulations and academic programs prior to the start of any class, semester, term or session.

Tuition*

Tuition, per credit hour	$150
Executive MBA program	10,000
Non-credit course fee, per course	285
Auditor, per course	285

Nonrefundable Fees

Application Fee	$20
Auditor application fee	20
New international student fee (one-time fee)	200
Continuing registration fee	25
Graduate Student Council fee, per term	3
Graduation fee	35
Late filing fee to March 15, Oct. 31	25
Graduation refiling fee	15
Laboratory fee	60
Computer use fee	60
Late payment fee (after scheduled due date)**	25
Late registration fee, current students	15
Registration fee, per term	5
Senior professional certificate fee (payable upon completion of program)	10
Transcript fee, first copy	free
Additional copies	4
Fee for dropping a course	5
Make-up examination fee	5
Make-up test fee	3

*Tuition will be higher for 1984-85.

**A late fee plus a 1½% per month late penalty will be assessed on outstanding balances.

Payment

Tuition for graduate courses is due at registration. However, the university permits graduate students to pay tuition on an installment basis, paying one half with the registration form and the balance before the first day of the term. All students who have not completed tuition payments by the first day of the term will be assessed the late payment fee.

Students are responsible for payment of tuition to the university, even though they may be eligible for their employer's tuition reimbursement plan. Students are responsible for making their own arrangements with their employers for reimbursement.

The university withholds the giving of grades, the award of diplomas, the issuance of transcripts and the granting of honorable dismissal to any student whose account is in arrears.

The university accepts MasterCard and VISA for payment of tuition.

Withdrawal

To be eligible for a refund of tuition, students must formally notify the registrar of their intention to withdraw by completing the university withdrawal form and submitting it to the registrar by mail or in person. The date of the postmark on mailed withdrawal form, or the date of submission on those brought in person, determines the amount of the refund, if any, due the student.

Refunds

The refund policy for graduate students who withdraw from any course or from any program is as follows: 80 percent refund of tuition upon formal withdrawal prior to the second regularly scheduled class meeting, 60 percent refund of tuition upon formal withdrawal prior to the third regularly scheduled class meeting, 40 percent refund of tuition upon formal withdrawal prior to the fourth regularly scheduled class meeting, 20 percent refund of tuition upon formal withdrawal prior to the fifth regularly scheduled class meeting. No refund will be made after the fifth regularly scheduled class meeting.

Living Costs

Estimated costs for attending the University of New Haven Graduate School for the 1983-84 academic year are as follows:

Single Student	**6 Credits**	**9 Credits**	**12 Credits**
Tuition and Fees	$ 908.	$ 1,358.	$ 1,808.
Books and Materials	60.	90.	120.
Base Living Costs	2,494.	2,494.	2,494.
Cost per Trimester	$ 3,462.	$ 3,492.	$ 4,422
Cost per Year (10 months)	$10,386.	$11,826.	$13,266
Married—No Children			
Tuition and Fees	$ 908.	$ 1,358.	$ 1,808.
Books and Materials	60.	90.	120.
Base Living Costs	3,350.	3,350.	3,350.
Cost Per Trimester	$ 4,318.	$ 4,798.	$ 5,278.
Cost Per Year (10 months)	$12,954.	$14,394.	$15,834.

Additional family members:	1 Child	$3,198.
	2 Children	5,381.
	3 Children	9,367.

Additional living costs for summer:

Single	$1,497.		
Married	$2,011.		
Children	1—$640.	2—$1,155.	3—$2,004.

NOTE: Living costs are based on Estimated BLS Moderate Consumption Budget Standards (20-35 age group).

Financial Support

Financial support is available to graduate students in the form of assistantships, fellowships, grants-in-aid, loans and work study.

Assistantships are competitive appointments. The full-time graduate assistant works 20 hours per week and receives compensation and partial tuition support. The part-time graduate assistant carries a varying work requirement of between 5 and 10 hours per week for which the assistant receives compensation, but no tuition support. These awards are generally made in the spring of the preceding academic year.

Fellowships are competitive awards made to returning students on the basis of outstanding academic achievement.

Grant-in-aid awards are based upon financial need and require that the Graduate and Professional School Financial Aid Service (GAPSFAS) application be received by the financial aid office no later than July 1, November 15 and February 15, depending upon when the student is beginning graduate study. Applications received after these dates can be acted upon only as funds permit.

The state of Connecticut and other states have established loan programs offering long-term loans at low interest rates. In Connecticut, a full-time graduate student may borrow up to a maximum of $5,000 each school year. Repayment starts six months after graduation. Federal interest benefits cover the full interest while in attendance and during the year following graduation.

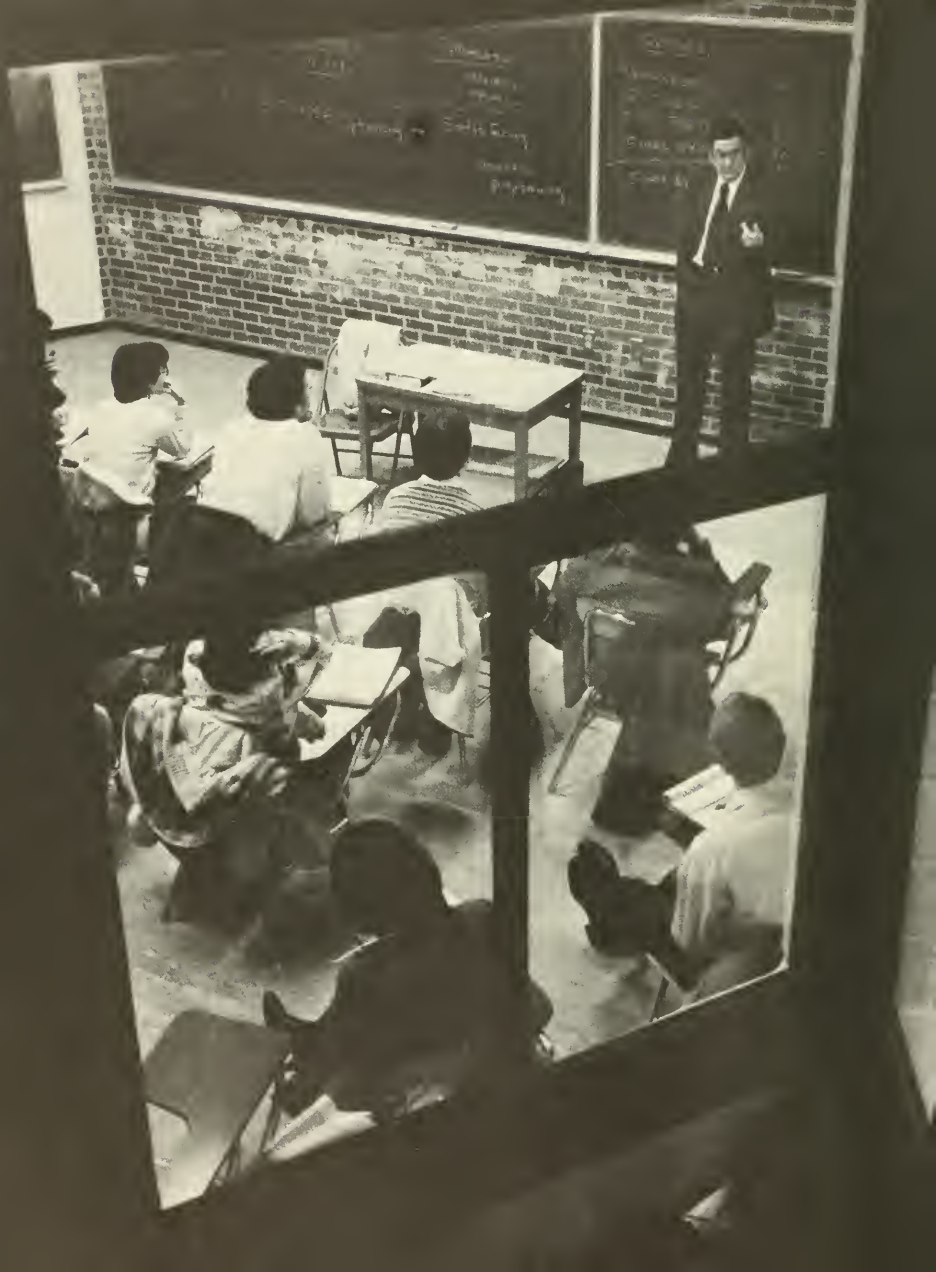
Part-time employment is also available to graduate students under the college work-study program. The program enables students with financial need to work on- or off-campus for a maximum of 20 hours a week.

Application and Eligibility

A GAPSFAS application is required for all forms of support based upon need. GAPSFAS applications are available in the financial aid office and the Graduate School office.

GAPSFAS applications are mailed by the student directly to GAPSFAS for processing, after which GAPSFAS will forward the application to the university. Generally, GAPSFAS requires four weeks to process applications before forwarding to the school. Since the university must receive the processed application by the deadline date, approximately four weeks before the start of the term for which the student is seeking aid, students are encouraged to file financial applications early. A list of exact university deadlines is available from the financial aid office.

International students are not eligible for financial assistance based upon need, since they must certify availability of sufficient funds at time of entry. Students on academic probation are not eligible for financial aid.



ACADEMIC PROGRAMS

Accounting

Coordinator: Robert E. Wnek, Assistant Professor of Accounting and Finance, CPA, J.D., Delaware Law School of Widener College

The overall objective of the master of science in accounting program is to provide a framework for accounting inquiry, devised in structure and content from the entire scope and process of accounting-information-based economic decision making. The existence of such a framework is intended to provide graduate accountants and professional practitioners an opportunity to share in the development and assessment of issues of accounting interest within a decision-making context. Accordingly, the M.S. program is structured to receive its objective and direction from the overall objective of accounting—providing information useful to the process of economic decision making.

To accomplish this objective, the M.S. program offers a structure of studies designed to provide:

- an examination of the foundations of economic decision making (foundation courses, 18 credits);
- an analysis of the role and usefulness of accounting information for economic decision making (core courses, 15 credits); and
- an opportunity for further selected specialization from the generally recognized branches or divisions of accounting inquiry (electives, 9 credits).

Each student, upon entering the program, will be assigned a faculty advisor who will assist the student throughout the program of study, particularly with the selection of suitable electives. The assigned faculty advisor will also act as, or assist in the selection of, the student's thesis advisor.

Admission Policy

Admission to the program is open to persons holding an undergraduate degree from an accredited institution, preferably, but not exclusively, in accounting or in business administration with a major in accounting. Persons holding other than the above degrees will be required to take a number of selected undergraduate courses. Admission is based primarily on an applicant's undergraduate record; however, the promise of academic success is the essential factor for admission. In support of their applications, persons may submit their scores from the GMAT. An applicant may be required to take this test.

M.S., Accounting

A minimum total of 42 credits on the graduate level will be required to earn the master of science in accounting. In addition, selected undergraduate courses in accounting may be required of students not holding an undergraduate degree in accounting. Individual programs of study are determined after a conference with the coordinator.

Students are advised to consult the coordinator as soon as possible after matriculating in the program.

See page 72 for the senior professional certificate in accounting.

Thesis

All students are required to write a thesis. The thesis must show ability to organize material in a clear and original manner and present well-reasoned conclusions. Students are responsible for selecting a topic, approaching a faculty member to serve as chairperson, and selecting a committee. The committee must consist of the chairperson and one other faculty member.

The complete and final manuscript must be submitted to the thesis advisor prior to the end of the fifth week of the term in which the candidate expects to complete the requirements for the degree. Thesis preparation and submission must comply with the Graduate School policy on theses detailed elsewhere in this catalog.

Required Courses

Foundation Courses

EC 604	Macroeconomic Analysis	3
EC 603	Microeconomic Analysis	3
FI 651	Portfolio Management and Capital Market Analysis	3
FI 615	Finance	3
MG 637	Management	3
QA 604	Probability and Statistics	3

Core Courses

A 650	Advanced Accounting Theory	3
A 621	Managerial Accounting or	
A 661	Managerial Accounting Seminar	3
A 654	Financial Statements: Reporting and Analysis	3
A 698-699	Thesis I & II	6
	Electives	9
	Total credits	**42**

Elective Courses

Financial Accounting Specialization

A 651	Financial Accounting Seminar	3
A 652	Advanced Auditing	3
A 653	Accounting for the Not-for-Profit Organization	3
A 656	International Accounting	3
FI 649	Security Analysis	3

Managerial Accounting Specialization

A 661	Managerial Accounting Seminar	3
A 641	Accounting Information Systems	3
A 642	Operational Auditing	3
FI 645	Corporate Financial Theory	3

Taxation Specialization

A 601	Federal Income Taxation I	3
A 602	Federal Income Taxation II	3
A 604	Corporate Income Taxation I	3

Business Administration/ Public Administration Dual Degree Program

Coordinator: Lynn H. Monahan, Associate Professor of Criminal Justice, Ph.D., University of Oregon

The M.B.A./M.P.A. dual degree program is designed for those students whose interests or career objectives are focused at both the public and private sectors of the economy. The program broadly stresses the use of management skills and analytic techniques applied to business, industrial, governmental and not-for-profit organizations.

M.B.A./M.P.A. Dual Degree

The basic M.B.A./M.P.A. program consists of 72 credit hours. Up to 12 of these credit hours may be waived on the basis of undergraduate course work, leaving a minimum requirement of 60 credit hours. All waivers must be approved in writing by the appropriate department and are conditional upon subsequent academic performance.

Graduate credit may be transferred from other accredited institutions subject to the Graduate School policy on transfer credit detailed elsewhere in this catalog. In all cases, the residence requirement for the two degrees shall be 60 credit hours completed at the University of New Haven. In addition, a minimum of 21 credit hours must be earned in business courses and a minimum of 21 credit hours must be earned in public administration courses..

See page 79 for the senior professional certificate in public management.

Thesis

All students must write a thesis. The thesis must show ability to organize material in a clear and original manner and present well-reasoned conclusions.

The thesis is written under the direction of the faculty member in charge of the departmental program or a faculty member with special competence in the subject matter covered by the thesis. The complete and final manuscript must be submitted to the thesis advisor prior to the end of the tenth week of the term in which the candidate expects to complete the requirements for the degree.

Thesis preparation and submission must comply with Graduate School policy on thesis requirements detailed elsewhere in this catalog.

Required Courses

PA 601	Principles of Public Administration	3
PA 602	Public Policy Formulation and Implementation	3
PA 604	Communities and Social Change	3
EC 604	Macroeconomic Analysis, *or*	
EC 608	Economics for Public Administrators	3
PA 611	Research Methods in Public Administration	3
PA 620	Personnel Administration and Collective Bargaining in the Public Sector	3
PA 625	Administrative Behavior, *or*	
P 619	Organizational Behavior	3
PA 632	Public Finance and Budgeting	3
EC 603	Microeconomic Analysis	3
QA 604	Probability and Statistics	3
QA 605	Advanced Statistics	3
MK 609	Marketing	3
FI 615	Finance	3
MG 637	Management	3
A 621	Managerial Accounting	3
EC 625	Industrial Relations	3
	Electives (Public Administration)	9
	Electives (Business)	9
	Thesis I & II	6
	Total credits	72

Community Psychology

Coordinator: Robert J. Hoffnung, Professor of Psychology, Ph.D., University of Cincinnati

Community psychology begins with the assumption that human problems occur within a social context and that the most effective interventions into these problems are those that take place within a community framework.

Accordingly, the M.A. program in community psychology provides broad training in current approaches to preventing and treating psychological distress at the level of social institutions, organizations and groups rather than just the individual. Methods of community analysis, consultation and crisis intervention are considered as well as program development, administration and evaluation.

Classroom study is closely integrated with supervised field experiences in a variety of human service organizations and community settings.

Graduates are able to assume positions of responsibility in a broad range of human service settings, such as mental health programs, youth service bureaus, community houses, child development programs, municipal services, halfway houses, senior citizen centers, private agencies, health care systems and community action programs.

We welcome full- and part-time students with varying degrees of human service experience.

Admission Policy

An undergraduate degree from an accredited institution is required. A major in psychology is preferred but not required. However, all students are expected to have at least an introductory level understanding of psychological concepts, principles and methods before entering. Students who have not had an undergraduate course in statistical methods will be required to take one before entry into P 609. We prefer students with strong academic records but welcome applications from students whose work and related experiences suggest potential for success in community psychology.

Applicants are required to submit materials directly to the Graduate School. They may be required to submit scores from either the Miller Analogies Test or the Graduate Record Examinations Aptitude Test, at the discretion of the department. Students intending to go on for further graduate work are strongly encouraged to take the GRE early in the first year.

Practicum Seminars and Field Work

Supervised field experience in a variety of settings represents a major component of the M.A. program in community psychology. Students plan their field work activities under the guidance of both the program's field placement coordinator and their supervisor from the field setting. In order to maximize the potential for learning inherent in these experiences, all students take practicum seminars whose content reflects the focus of their field work activities. These seminars enable students to conceptualize issues that they encounter in the field within a broader theoretical framework.

Students with a year or more of appropriate full-time human service experience in a particular field work area will be allowed to substitute an elective for the field work, contingent upon approval of the program coordinator. All students are required to take the three practicum seminars.

Thesis

Students who elect to write a thesis must register for P 698, Thesis I, and P 699, Thesis II. The thesis must show ability to organize materials in a clear and original manner and present well-reasoned conclusions. A thesis is strongly recommended for students wishing to pursue doctoral training after graduation.

The thesis is written under the direction of the faculty member in charge of the thesis seminar or a faculty member with special competence in the subject area of the thesis. The complete and final manuscript must be submitted to the thesis advisor prior to the end of the tenth week of the term in which the candidate expects to complete the requirements for the degree.

Transfer Credit

Transfer credit may be given for graduate course work completed at other accredited institutions, subject to the Graduate School policy detailed elsewhere in this catalog.

M.A., Community Psychology

The program consists of 42 credit hours, 24 of which are of the core curriculum completed by all students and 12 of which constitute one of two areas of concentration. On entering the program, each student chooses one of the concentration options. Typically, students complete most of the core requirements before focusing on their concentration.

See page 73 for the senior professional certificate in applications of psychology.

Required Courses

P 605	Survey of Community Psychology	3
P 609	Research Methods	3
P 610	Program Evaluation	3
P 611	Practicum Seminar I: The Dyadic Relationship	3
P 614	Field Work I	2
P 612	Practicum Seminar II: Models of Consultation	3
P 615	Field Work II	2
P 613	Practicum Seminar III: Systems Intervention	3
P 616	Field Work III	2
	Electives	6
	Concentration	12
	Total credits	**42**

Concentration in Community-Clinical*

The Community-Clinical concentration is designed to prepare students for careers in clinical, mental health, and related human service settings. Direct work with individuals within the social and community contexts in which they live as well as consultation, social problem analysis and prevention techniques and strategies are stressed.

P 621	Behavior Modification	3
P 625	Developmental Psychology	3
P 628	The Interview	3
P 629	Introduction to Counseling	3
P 632	Group Dynamics and Group Treatment	3
P 634	Personality Assessment	3
P 636	Abnormal Psychology	3
	Total credits	**12**

*Students will choose four courses from those offered within a single concentration.

Concentration in Community Organization and Program Administration*

The Community Organization and Program Administration concentration is designed to prepare students for careers which emphasize the administration of traditional and non-traditional programs and services and the planning and development of innovative approaches to treatment and prevention at the community, organizational and social systems levels.

*Students will choose four courses from those offered within a single concentration.

P 619	Organizational Behavior	3
P 623	Psychology of the Small Group	3
P 631	Social Psychology	3
P 650	Ecological Psychology	3
PA 604	Communities and Social Change	3
	Total credits	**12**

Computer and Information Science

Coordinator: Roger G. Frey, Associate Professor, Industrial Engineering, Ph.D., Yale University

The master of science in computer and information science curriculum is an interdisciplinary program with a software orientation. It is designed to provide a high-level academic background for CIS managers and systems analysts in all career areas. A wide selection of electives allows students to concentrate in either technical or business applications.

M.S., Computer and Information Science

The basic program consists of 48 credit hours. Required courses may be waived on the basis of undergraduate courses taken at accredited institutions.

All waivers must be approved in writing by the industrial engineering department and are conditional upon subsequent academic performance. The transfer of credit from other institutions will be permitted subject to the Graduate School policy on transfer credit detailed elsewhere in this catalog.

For students with little background in computers and programming (no more than one prior course), IE 602 Computing Fundamentals is required; elective credit will be awarded for the course.

Seminar Project

The program requires all students to complete IE 690 Seminar Project. This requirement is met by the preparation of a relevant seminar project report, prepared under the direction of a faculty advisor. The complete and final manuscript must be submitted to the project advisor prior to the end of the tenth week of the term in which the candidate expects to complete the requirements for the degree. For further specifications, see *Research Projects, Seminar Projects and Independent Study Requirements* detailed elsewhere in this catalog. It is suggested that a student begin work on the seminar project after having completed at least 15 credit hours.

In certain cases, students who routinely complete projects similar to the required seminar project as a part of their professional duties may petition to satisfy the seminar project requirement by taking two advanced industrial engineering electives in place of the project. Such a substitution must have the prior written approval of the program coordinator.

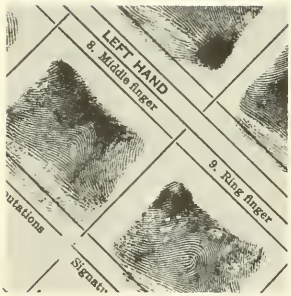
See page 73 for the senior professional certificate in computer applications and information systems.

Required Courses

IE 601	Introduction to Operations Research/ Management Science	3
IE 603C	Introduction to Digital Computers (COBOL), *or*	
IE 603F	Introduction to Digital Computers (FORTRAN)	3
IE 604	Management Systems	3
IE 605	Advanced Business Programming, *or*	
IE 606	Advanced Technical Programming	3
IE 610	Computer Systems Selection	3
IE 614	Data Information Systems	3
IE 690	Seminar Project	3
EE 615	Introduction to Computer Logic	3
M 610	Fundamentals of Calculus and Linear Algebra	3
	Electives (I.E., Math, or E.E.)	9
	Electives	12
	Total credits	**48**

Criminal Justice

Director: Lynn H. Monahan, Associate Professor of Criminal Justice, Ph.D., University of Oregon



A key objective of the master of science in criminal justice program is the training and education of men and women planning careers in the field of criminal justice as well as the advanced training and education of the men and women who staff the agencies and institutions of the criminal justice system.

The program stresses a broad understanding of the social and behavioral sciences, the institutions of the criminal justice system, and the development of methodological tools and skills. This is done somewhat at the expense of courses that are narrowly professional in the belief that the field of criminal justice is dynamic and that a broad understanding of the social and behavioral sciences and the methodological skills and tools will prove more valuable to a student's career in the long run than narrow professional training.

The broad fields of the criminal justice program at the university are social and behavioral science, the institutions of the criminal justice system and methodological tools and skills.

The courses in the area of social and behavioral science stress the theories of the behavior of man in a social order and the sanctions imposed by different societies to control the social behavior of their members.

Courses in the area of criminal justice institutions stress the study of the existing system from the police, through the courts, the penitentiaries, and the system of probation and parole.

The methodological courses expose students to the tools of research and analysis and the contribution of systems analysis to the efficient administration of the criminal justice system.

M.S., Criminal Justice

A total of 45 credit hours is required of candidates for the degree of master of science of criminal justice.

Candidates must complete required credit hours of required courses in the core curriculum. After consultation with their advisor, students select credit hours of electives from approved courses in the departments of criminal justice, economics, psychology, political science, sociology, industrial engineering and management science.

The transfer of credit from other institutions will be permitted subject to the Graduate School policy on transfer credit detailed elsewhere in this catalog.

Applicants are also required to complete a questionnaire to be submitted directly to the Graduate School.

Thesis

Students electing to write a thesis must register for thesis credit with the department. The thesis must show ability to organize material in a clear and original manner and present well-reasoned conclusions.

The thesis is written under the direction of the faculty member in charge of the departmental thesis program or a faculty member with special competence in the subject matter covered by the thesis. The complete and final manuscript must be submitted to the thesis advisor prior to the end of the tenth week of the term in which the student expects to complete the requirements for the degree.

Thesis preparation and submission must comply with the Graduate School policy on theses detailed elsewhere in this catalog.

Required Courses

CJ 601	Seminar in Interpersonal Relations	3
CJ 605	Social Deviance	3
CJ 610	Administration of Justice	3
CJ 628	Introduction to Systems Theory	3
CJ 635	Statistics in the Public Sector	3
CJ 637	Contemporary Issues in Criminal Justice	3
PA 611	Research Methods in Public Administration	3
	Electives (Approved)	24
	Total credits	**45**

Concentrations

In addition to the master of science degree program in criminal justice, there are three concentrations that a student may choose to elect—criminal justice management, correctional counseling, and security management.

Concentration in Criminal Justice Management

This concentration is designed for those individuals wishing to pursue a career in the management of a criminal justice agency. Courses are offered jointly between the criminal justice and the public administration programs.

CJ 601	Seminar in Interpersonal Relations	3
CJ 610	Administration of Justice	3
CJ 612	Criminal Justice Management	3
CJ 628	Introduction to Systems Theory	3
CJ 635	Statistics in the Public Sector	3
PA 611	Research Methods in Public Administration	3
CJ 655	Bureaucratic Organization of Criminal Justice	3
PA 602	Public Policy Formulation and Implementation	3
PA 604	Communities and Social Change	3
PA 620	Personnel Administration and Collective Bargaining in the Public Sector	3
PA 632	Public Finance and Budgeting	3
	Electives (Approved)	12
	Total credits	**45**

Concentration in Correctional Counseling

This program, offered jointly between the criminal justice program and the Department of Psychology, is designed for those individuals currently in correctional counseling positions or those who anticipate a career in correctional counseling.

CJ 601	Seminar in Interpersonal Relations	3
CJ 610	Administration of Justice	3
CJ 622	Learning Theory: Applications in Criminal Justice	3
CJ 624	Group Process in Criminal Justice	3
CJ 693	Criminal Justice Internship I	3
P 611	Practicum Seminar I: The Dyadic Relationship	3
P 618	Community Mental Health Philosophy and Concepts	3
P 628	The Interview	3
P 629	Introduction to Counseling	3
	Electives*—Criminal Justice	9
	Electives*—Psychology	9
	Total credits	**45**

*Electives will be chosen by consent of advisor. Students may be required to take CJ 694—Internship II, depending upon experience, ability, and background.

Concentration in Security Management

This concentration is designed for those individuals who are pursuing or wish to pursue careers in security management within business or industry. Course work stresses a broad interaction between security, business administration, fire sciences and criminal justice.

CJ 601	Seminar in Interpersonal Relations	3
CJ 605	Social Deviance	3
CJ 612	Criminal Justice Management	3
CJ 614	Survey of Forensic Science	3
CJ 669	Dynamics, Evaluation and Prevention of Structural Fires	3
CJ 675	Private Security Law	3
CJ 676	Security Management Seminar	3
CJ 677	Private Security in Modern Society	3
SH 602	Safety Organization and Administration	3
	Electives (Approved)	12

and two courses from among:

CJ 637	Contemporary Issues in Criminal Justice	3
EC 625	Industrial Relations	3
EC 687	Collective Bargaining	3
PA 625	Administrative Behavior	3
	Total credits	**45**

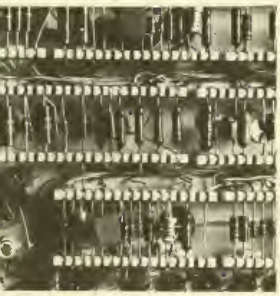
Professional Certificate in Security Management

This certificate is designed for those professionals who wish to enhance their knowledge and skills in security management.

Admission into the professional certificate program in security management is open to all persons who hold an undergraduate degree from an accredited institution of higher education.

CJ 612	Criminal Justice Management	3
CJ 669	Dynamics, Evaluation and Prevention of Structural Fires	3
CJ 675	Private Security Law	3
CJ 676	Security Management Seminar	3
CJ 677	Private Security in Modern Society	3
SH 602	Safety Organization and Administration	3
	Total credits	**18**

Electrical Engineering



Coordinator: Gerald J. Kirwin, Professor of Electrical Engineering, Ph.D., Syracuse University

This program is intended to meet the needs of professionally employed engineers and scientists for academic work beyond the baccalaureate level. It has been designed to deepen the understanding of modern analysis and synthesis techniques as they apply to engineering design. A major goal of this program is to provide a discussion of the characteristics of the latest devices and systems and of their applications in current engineering design. Both analytical and numerical procedures are developed with particular emphasis on the use of computers for problem solving and as elements in larger systems.

The program centers on a core sequence which all students are expected to take. The core courses contain advanced methods of analysis and design which are of common interest to electrical engineers. Each student completes a program by electing courses that are particularly suited to current personal interests. In general the elective courses must be courses from those listed below. Early in the program the student, with the help and approval of an advisor, prepares a detailed plan ensuring an overall educational experience that is integrated and logical. All decisions regarding both core and elective courses are subject to the final approval of the student's advisor.

Admission Policy

Admission to the program is open to persons holding an undergraduate engineering degree from an institution accredited by the Accrediting Board for Engineering and Technology. Though admission decisions are based primarily on an applicant's undergraduate record, the promise of academic success is the essential factor for admission.

M.S., Electrical Engineering

A minimum total of 39 credit hours must be completed to earn the master of science in electrical engineering degree. The transfer of credit from other institutions will be permitted subject to the Graduate School policy on transfer credit detailed elsewhere in this catalog.

Thesis

There is no specific thesis requirement for the master of science in electrical engineering. However, students are encouraged to submit a thesis proposal covering applied research in an area of mutual interest to the student and a supervising member of the faculty. If a proposal shows promise of yielding a worthwhile contribution to the professional objectives of the student, and a faculty member accepts the role of supervisor, the student may embark upon the research and earn six elective credits. Students electing to do a thesis project will be expected to make an oral presentation of the results of the project.

The complete and final manuscript must be submitted to the thesis advisor prior to the end of the tenth week of the term in which the candidate expects to complete the requirements for the degree. Thesis preparation and submission must comply with the Graduate School policy on theses detailed elsewhere in this catalog.

The thesis is deposited permanently in the library. Students are required to submit two copies of the thesis for the library. Additional copies of the thesis are usually required. For this requirement and other regulations regarding the preparation of a thesis, students should consult the *Manual for the Preparation of Graduate Theses and Seminar Projects*. Copies of the manual are available in the Graduate School office.

Required Courses

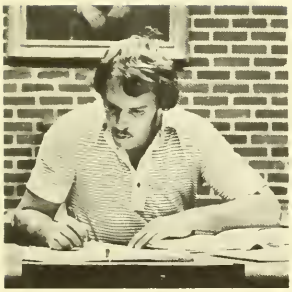
EE 603	Discrete and Continuous Systems I	3
EE 604	Discrete and Continuous Systems II	3
EE 630	Electronic Instrumentation I	3
EE 640	Computer Engineering I	3
EE 650	Random Signal Analysis	3
IE 685	Theory of Optimization	3
M 620	Numerical Analysis	3
M 624	Applied Mathematics	3
M 632	Methods of Complex Analysis	3
	Electives (Approved)	12
	Total credits	**39**

Elective Courses

EE 605	Modern Control Systems	3
EE 608	Computer Aided Design	3
EE 631	Electronic Instrumentation II	3
EE 634	Digital Signal Processing I	3
EE 635	Digital Signal Processing II	3
EE 641	Computer Engineering II	3
EE 645	Power Systems Engineering I	3
EE 646	Power Systems Engineering II	3
EE 658	Microprocessors—Theory and Applications	3
EE 670	Special Topics—Electrical Engineering	3
EE 695	Independent Study I	3
EE 696	Independent Study II	3
EE 698-699	Thesis I and II	6

Environmental Engineering

Coordinator: George R. Carson, Associate Professor of Civil Engineering, M.S.C.E., Columbia University



The environmental engineering program is intended to meet the needs of engineers for academic work beyond the baccalaureate level. The program is interdisciplinary in nature and incorporates both engineering and science courses.

There exists today a need for a substantial number of engineers knowledgeable in environmental areas. Industries that are required to control the pollution of air and water need environmental engineers. Federal, state and local governments must hire employees and consultants to assist them in environmental matters. Other new vistas will undoubtedly open to the environmental engineers in the future. Environmental engineers will be in increasingly greater demand with the continually increasing problems of pollution.

The recognition and solution of environmental problems are largely the responsibility of engineers and scientists. To perform effectively in this massive effort, they must be technically competent as well as knowledgeable in social and economic matters.

This program provides the advanced educational skills necessary to meet the ever increasing need for engineers with an environmental background. It is designed to offer vigorous, professionally oriented, engineering and science courses in the areas of solid waste, water and air pollution.

Approximately two-thirds of the program consists of a required sequence of courses which each student must complete. The balance of the program consists of courses selected from the list of electives. Selection will be based on the student's principal field of interest. Each student, upon entering this program, will be assigned a faculty advisor who will consult with the student during the program of study and will assist the student in selection of suitable electives. The faculty advisor will also act as the student's research project advisor.

Admission Policy

Candidates for admission in the environmental engineering program are expected to have an engineering degree from an institution accredited by the Accrediting Board for Engineering and Technology.

M.S., Environmental Engineering

A total of 39 credit hours must be completed to earn the master of science in environmental engineering degree. The transfer of credit from other institutions will be permitted subject to the Graduate School policy on transfer credit detailed elsewhere in this catalog.

Required Courses

CE 601	Water Treatment	3
CE 602	Wastewater Treatment	3
CE 605	Solid Waste Management	3
CE 606	Environmental Law and Legislation, *or*	
EC 608	Economics for Public Administrators	3
CE 612	Advanced Wastewater Treatment	3
CE 613	Industrial Wastewater Control	3
CE 690	Research Project	3
CH 601	Environmental Chemistry	3
SC 601	Introduction to Ecology	3
SC 602	Pollutants and the Aquatic Environment, *or*	
SC 603	Air Pollution	3
	Elective (CE)	3
	Electives (Approved)	6
	Total credits	**39**

Environmental Science

Coordinator: Charles L. Vigue, Associate Professor of Science and Biology, Ph.D., North Carolina State University

The environmental science program is intended to meet the needs of scientists for academic work in environmental studies beyond the baccalaureate level. The program is interdisciplinary in nature and incorporates science and engineering courses. This program is designed to accommodate the student with a degree in one of the natural sciences.

There exists today a need for a substantial number of scientists knowledgeable in environmental areas. Industries that are required to control the pollution of air and water need environmental scientists. Federal, state and local governments must hire employees and consultants to assist them in environmental matters. Other new vistas will undoubtedly open to the environmental scientists of the future. Environmental scientists will be in increasingly greater demand with the continually increasing problems of pollution.

This program provides the advanced educational skills necessary to meet the ever increasing need for scientists with an environmental background. It is designed to offer vigorous, professionally oriented science and engineering courses in the areas of solid waste, water and air pollution.

Approximately two-thirds of the program consists of a required sequence of courses that each student must complete. The balance of the program consists of courses selected from a list of electives. Selection will be based on the student's principal field of interest. Each student, upon entering this program, will be assigned a faculty advisor who will consult with the student during the program of study and will assist in selection of suitable electives.

Admission Policy

Candidates for admission to the environmental science program would be expected to have a degree in one of the natural sciences in which certain prerequisite courses have been completed. Students without these courses would be admitted to the program after completing these prerequisites.

M.S., Environmental Science

A total of 39 credit hours must be completed to earn the master of science in environmental science degree. The transfer of credit earned at other institutions will be permitted subject to the Graduate School policy on transfer credit detailed elsewhere in this catalog.

Required Courses

CE 601	Water Treatment, *or*	
CE 602	Wastewater Treatment	3
CE 605	Solid Waste Management	3
CE 606	Environmental Law and Legislation, *or*	
EC 608	Economics for Public Administrators	3
CH 601	Environmental Chemistry	3
SC 601	Introduction to Ecology	3
SC 602	Pollutants and the Aquatic Environment	3
SC 603	Air Pollution	3
SC 608	Water Quality	3
SC 610	General Environmental Health	3
SC 612	Freshwater Ecology	3
SC 613	Marine Ecology	3
SC 698-699	Thesis I and II *or*	
	Electives (approved)	6
	Total credits	**39**

Executive Master of Business Administration

Director of Executive Development: Willard M. Salzer, M.A., University of Colorado

The Graduate School and the School of Business offer a master of business administration degree for high-level executives with extensive managerial experience. The program is designed specifically in consideration of managerial responsibilities and existing time constraints.

The EMBA degree program is a two-year, part-time degree program organized to meet the educational needs and executive responsibilities of corporate and institutional leaders. Individual participation is emphasized through class discussions and cooperation with others in the class. Each class is generally limited to between 15 and 20 students. Class members commence and conclude the program as a group. Courses are offered in downtown New Haven and Stamford.

No graduate transfer credit is accepted into the EMBA program. Admission to the EMBA degree program is by special application, the form for which may be obtained from the EMBA program director. Classes commence in September and January, providing a sufficient number of qualified applicants have applied from which proper selection may be made. An admission committee screens the applications to insure proper selection. A personal interview with the admissions committee is required. Factors such as current position, length of top-management experience, and prior formal education are important factors in the selection process. The selection committee attempts to provide from among the applicants those individuals who will bring a diverse grouping of managerial skills and experiences, thereby allowing the students to learn from each other as well as from the faculty.

Upon completion of the program, participants will be awarded the degree of master of business administration (the executive program).

Information concerning admission procedures and the academic calendar may be obtained by writing to the EMBA program director.

Executive M.B.A.

The program consists of 20 courses scheduled into two ten-month academic calendar years. Each course is four sessions in length. All classes meet one afternoon/early evening per week in designated off-campus conference facilities for participant convenience. Participants must agree in advance to attend all classes except for emergencies. Students must be prepared to devote additional time for class preparation and reading assignments.

Required Courses

The courses in the Executive M.B.A. program are listed below in the order in which they are taken.

EXID 903 The Communication Process 1½

Quantitative Group

EXID 936 Statistics and Forecasting 1½
EXID 915 Quantitative Decision Making 1½
EXID 918 Managerial Economics 1½
EXID 939 Operations Research and Management 1½
EXID 960 Computers and Management 1½

Industrial Relations Group

EXID 909 Business and Government Relations 1½
EXID 948 Labor and Management Relations 1½
EXID 945 Human Resources Management 1½

Finance Group

EXID 924	Financial Management I	1½
EXID 927	Financial Management II	1½
EXID 912	Financial Accounting	1½
EXID 942	Managerial Accounting	1½

Marketing Group

EXID 933	International Business	1½
EXID 930	Marketing Management	1½
EXID 951	Marketing Management Seminar	1½

Management Group

EXID 906	The Management Process	1½
EXID 954	Organizational Development	1½
EXID 957	Corporate Policy and Strategy	1½
EXID 921	Executive Development Seminar	1½
	Total credits	**30**

Forensic Science

Director: R.E. Gaensslen, Professor of Forensic Science, Ph.D., Cornell University

Forensic science is a broad, interdisciplinary field in which the natural sciences are employed to analyze and evaluate physical evidence in matters of the law. The interdisciplinary forensic science program has these concentrations: criminalistics, fire science and advanced investigation. In addition to the M.S. degree programs, professional certificates are offered in all the specialties for those who require only the specialized courses. The criminalistics program provides the advanced technical background for professional laboratory examiners and those wishing to enter the criminalistics field. The fire science program provides advanced training in arson scene investigation, laboratory analysis of arson-related evidence, and related aspects of arson and fire investigation. The advanced investigation program provides advanced training in the forensic sciences and in investigation techniques, and is designed for students interested in identification, crime-scene, investigative and other field work.

The program and courses stress not only up-to-date analytical and scientific methods, but also a broad understanding of the concepts underlying the forensic sciences. Degree programs in this program require a sequence of core courses, followed by concentration requirement courses, and a flexible offering of electives designed to meet individual needs.

Admission Policy

For admission to the criminalistics concentration in the M.S. in forensic science program, students must have an undergraduate degree in a natural science field. In addition, applicants are required to take the Graduate Record Examination (G.R.E.) and submit their scores to the Graduate School.

For admission to the fire science or advanced investigation concentration in the M.S. in forensic science program, students must have a baccalaureate degree from an accredited institution. The degree need not be in natural sciences, and the G.R.E is not required.

M.S., Forensic Science

Candidates are required to complete 40 credit hours of graduate work, which may include an internship in a forensic science laboratory. Transfer of credit from other institutions may be permitted subject to the Graduate School policy on transfer credit detailed elsewhere in this catalog.

Required Courses

CJ 614	Survey of Forensic Science	3
CJ 620	Advanced Criminalistics I	3
CJ 640	Advanced Criminalistics II	3
CJ 653	Physical Analysis in Forensic Science	3
CJ 673	Biomedical Methods in Forensic Science	3
	Total credits	**15**

Concentration in Criminalistics

CJ 621	Advanced Criminalistics I	1
CJ 641	Advanced Criminalistics II	1
CJ 654	Physical Analysis in Forensic Science	1
CJ 674	Biomedical Methods in Forensic Science	1
CJ 693	Criminal Justice Internship I, *or*	
CJ 690	Research Project I	3
	Electives	10–11
	Plus two from among:	
CJ 660	Forensic Microscopy	4
CJ 663	Advanced Forensic Serology I	4
CJ 664	Advanced Forensic Serology II	4
CJ 661	Medicolegal Investigation and Identification	3
CJ 662	Forensic Toxicology	4
CH 621	Chemical Forensic Analysis with Laboratory	4
	Total credits	**40**

Concentration in Advanced Investigation

CJ 616	Advanced Crime Scene Investigation	3
CJ 632	Advanced Investigation I	3
CJ 633	Advanced Investigation II	3
	Electives	13
	Plus one from among:	
CJ 608	Law and Evidence	3
PS 605	Criminal Law	3
	Total credits	40

Concentration in Fire Science

CJ 665	Legal Aspects of Fire and Arson Investigation	3
CJ 649	Fire Scene Investigation and Arson Analysis	4
CH 625	Chemistry of Fires and Explosions	3
	Electives	12
	Plus one from among:	
CJ 667	Fire and Building Codes, Standards, and Practices	3
CJ 668	Fire and Casualty Insurance Practices	3
CJ 669	Dynamics, Evaluation and Prevention of Structural Fires	3
	Total credits	40

Elective Courses

CJ 608 Law and Evidence
CJ 610 Administration of Justice
CJ 670 Selected Issues in Criminal Justice
CJ 693 Internship
CJ 697-699 Thesis
CJ 695 Independent Study
CJ 690-691 Research Project I & II
CJ 675 Private Security Law
CJ 676 Security Management Seminar
CJ 677 Private Security in Modern Society
SH 602 Safety Organization and Administration
SH 620 Occupational Safety and Health Law
SH 630 Product Safety and Liability

In addition, courses in lists from which two or more must be taken may be taken as electives. Courses listed as requirements for one of the concentrations may be taken as electives for other concentrations with the permission of the director of the program.

Students in the advanced investigation concentration will be encouraged to take either CJ 610 Administration of Justice, or CJ 651 Problems in the Administration of Justice as an elective.

Thesis

Students electing to write a thesis must register for thesis credit with the department. The thesis must show an ability to organize material in a clear and original manner, and present well-reasoned conclusions. Thesis preparation and submission must comply with Graduate School regulations detailed elsewhere in this catalog.

Professional Certificate Programs

Admission into the professional certificate program in criminalistics, fire science and advanced investigation is open to all persons who hold an undergraduate degree from an accredited institution of higher education.

Professional Certificate in Forensic Science/ Criminalistics

CJ 620	Advanced Criminalistics I	3
CJ 621	Advanced Criminalistics I	1
CJ 640	Advanced Criminalistics II	3
CJ 641	Advanced Criminalistics II	1
CJ 673	Biomedical Methods in Forensic Science	3
CJ 674	Biomedical Methods in Forensic Science	1
CJ 653	Physical Analysis in Forensic Science	3
CJ 654	Physical Analysis in Forensic Science	1
	and one from among the following:	
CJ 614	Survey of Forensic Science	3
CJ 610	Administration of Justice	3
CH 621	Chemical Forensic Analysis with Laboratory	4
CH 631	Advances in Analytical Chemistry	3
	Total credits	**19 or 20**

Professional Certificate in Forensic Science/ Fire Science

CJ 640	Advanced Criminalistics II	3
CJ 653	Physical Analysis in Forensic Science	3
CJ 665	Legal Aspects of Fire and Arson Investigation	3
CJ 649	Fire Scene Investigation and Arson Investigation	4
	and two from among the following:	
CJ 614	Survey of Forensic Science	3
CJ 667	Fire and Building Codes, Standards and Practices	3
CJ 668	Fire and Casualty Insurance Practices	3
CJ 669	Dynamics, Evaluation and Prevention of Structural Fires	3
CJ 693	Criminal Justice Internship I	3
CH 625	Chemistry of Fires and Explosions	3
	Total credits	**19**

Professional Certificate in Forensic Science/ Advanced Investigation

CJ 614	Survey of Forensic Science	3
CJ 616	Advanced Crime Scene Investigation	3
CJ 632	Advanced Investigation I	3
CJ 633	Advanced Investigation II	3
	and two from among the following:	
CJ 620	Advanced Criminalistics I	3
CJ 640	Advanced Criminalistics II	3
CJ 673	Biomedical Methods in Forensic Science	3
CJ 653	Physical Analysis in Forensic Science	3
CJ 661	Medicolegal Investigation and Identification	3
CJ 608	Law and Evidence	3
PS 605	Criminal Law	3
	Total credits	**18**

Gerontology

Coordinator: Judith Bograd Gordon, Associate Professor of Sociology, Ph.D., University of Michigan

The gerontology program is designed for both the practicing professional and those interested in the field of gerontology.

Gerontology is an interdisciplinary field. The core curriculum exposes students to the fundamental insights and perspectives of sociology, social welfare, political science, psychology and administration, and aids students to compare and contrast these disciplines. The program is designed to expose students to crucial skills necessary to function effectively as gerontological professionals and to prepare them to pursue leadership roles in the field.

The gerontology program is suitable for government employees, health care professionals and program administrators working in the field of aging, and for those considering such careers now or in the future.

See page 75 for the senior professional certificate in gerontology.

Admission Requirements

Prospective students must fulfill the admission requirements of the Graduate School. In addition, they may be required to fulfill additional requirements set by the Committee on Studies in Gerontology.

M.A., Gerontology

Each degree candidate will complete an 18-hour core curriculum, and either the 21-hour concentration in psycho-social studies or the 21-hour concentration in administrative studies. A total of 39 credit hours is required for the degree. The transfer of credit from other institutions will be permitted subject to the Graduate School policy on transfer credit detailed elsewhere in this catalog. All waivers must be approved in writing by the program coordinator.

Required Courses

SO 651	Social Gerontology*	3
SO 652	Seminar in Gerontology*	3
P 672	Psychology of the Middle and Later Years	3
PA 644	Administration of Programs and Services for the Aged	3
PS 633	The Political Process and the Aged	3
SC 642	Physical Aging	3
	Concentration	21
	Total credits	**39**

*Students are expected to take SO 651 Social Gerontology early in their studies and SO 652 toward the end of the program.

Concentration in Administrative Studies**

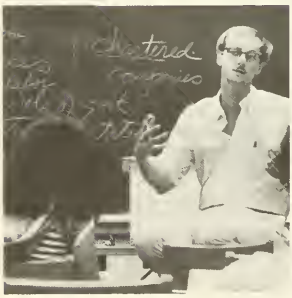
P 619	Organizational Behavior	3
PA 604	Communities and Social Change	3
PA 641	Financial Management of Health Care Organizations	3
PA 643	Health and Institutional Planning	3
	A management science elective, by advisement	3
	Electives, by advisement	6
	Total credits	**21**

** Students with no prior supervised working experience in gerontology are strongly advised to undertake a field work practicum.

Concentration in Psycho-social Relations**

SO 641	Death and Suicide	3
SW 651	Social Work with the Elderly I: Individuals, Families and Groups	3
SW 652	Human Services with the Elderly II: Programs, Planning, Policies	3
	Plus four courses from the following:	
P 623	Psychology of the Small Group	3
P 625	Developmental Psychology	3
P 630	Psychology of Personality	3
P 632	Group Dynamics and Group Treatment	3
P 636	Abnormal Psychology	3
	Elective	3
	Total credits	**21**

** Students with no prior supervised working experience in gerontology are strongly advised to undertake a field work practicum.



Humanities

Coordinator: David E.E. Sloane, Professor of English, Ph.D., Duke University

The M.A. in humanities emphasizes individual understanding and personal thought. A single course in areas of English, history, sociology, or another field in the arts and sciences is offered each trimester; students are otherwise encouraged to develop tutorials and seminars or investigate other areas of the graduate school curriculum. Our goal is increased personal sensitivity to the surrounding world through growth in a personally designed curriculum.

The basic course is typically offered on a weekday evening to accommodate adult learners. Each course is intended to challenge students to consider their own ethical decisions.

M.A., Humanities

Thirty hours of course work, including six hours devoted to a thesis or portfolio developed in close consultation with a UNH faculty member, are required for an M.A. in humanities.

Recent seminars include: "Ethics and Humor: The Urban Northeast 1830-1890"; "Social Welfare in Classical Greece and Rome"; "Literature and Visual Arts"; "Eli Whitney and the Federal Dream"; "Death and Aging." Thesis and independent study topics have included "Mark Twain"; "Business Ethics"; "The Role of the Jewish Mother"; "The Navajo Code Talkers"; "Teretzin Concentration Camp in WW II"; "The American Negro Spiritual"; "Balinese Music at the Paris Exposition"; "Anatomical Drawing"; and "Biological Illustration."

Required Courses

HU 606	Humanism and Its Methodology	3
	One course in the evolution of human thought in history: HU 601-2; 611; 616; 621; 626; or 661-669 or equivalent	3
	One course in values and ethics: HU 631; 636; 638; 641; 671-679 or equivalent	3
HU 698-699	Thesis I and II	6
	Elective seminars, colloquia, and Independent Study	15
	Total credits	**30**

Industrial Engineering

Coordinator: Ira H. Kleinfeld, Associate Professor of Industrial Engineering, Eng. Sc.D., Columbia University

The master of science in industrial engineering is considered a fifth-year or professional degree, and is designed to provide a broad background in operations research, man-machine systems and human factor analysis.

Admission Policy

Admission to the program is open to persons holding an undergraduate degree in engineering from a program accredited by the Accreditation Board for Engineering and Technology (ABET). In some cases, an applicant with a degree in a related field may be considered for admission. Applicants with degrees in fields other than industrial engineering will be required to take a number of undergraduate courses or otherwise demonstrate proficiency in several areas normally included in an industrial engineering program.

Though admission decisions are based primarily on an applicant's undergraduate record, the promise of academic success is the essential factor for admission.

M.S., Industrial Engineering

The basic program consists of 48 credit hours. The transfer of credit from other institutions will be permitted subject to the Graduate School policy on transfer credit detailed elsewhere in this catalog. Required courses may be waived on the basis of undergraduate courses taken at accredited institutions. All waivers must be approved in writing by the Department of Industrial Engineering and are conditional upon subsequent academic performance. In some cases, the program coordinator may permit substitution of relevant courses in place of the required courses.

Seminar Project

The program requires all students to complete IE 690 Seminar Project. This requirement is met by the preparation of a relevant seminar project report, prepared under the direction of a faculty advisor. The complete and final manuscript must be submitted to the project advisor prior to the end of the tenth week of the term in which the candidate expects to complete the requirements for the degree. For further specifications see *Research Projects, Seminar Projects and Independent Study* requirements detailed elsewhere in this catalog. It is suggested that a student begin work on the seminar project after having completed at least 15 credit hours.

In certain cases, students who routinely complete projects similar to the required seminar project as a part of their professional duties may petition to satisfy the seminar project requirement by taking two advanced industrial engineering electives in place of the project. Such a substitution must have the prior written approval of the program coordinator.

Required Courses

IE 601	Introduction to Operations Research/ Management Science	3
IE 603F	Introduction to Digital Computers (FORTRAN)	3
IE 607	Probability Theory	3
IE 624	Quality Analysis	3
IE 651	Human Engineering I	3
IE 690	Seminar Project	3
EC 603	Microeconomic Analysis, *or*	
EC 604	Macroeconomic Analysis	3
EC 625	Industrial Relations	3
P 619	Organizational Behavior, *or*	
P 620	Industrial Psychology	3
	Electives (IE or Math Courses)	9
	Electives	12
	Total credits	**48**

Industrial/Organizational Psychology

Coordinator: Robert D. Dugan, Associate Professor of Psychology, Ph.D., Ohio State University

The field of industrial and organizational psychology is directed toward the solution of a wide variety of human problems in organizational settings. This applied behavioral science and profession serves organizations and their employees in a number of areas. The list includes:

- selection and placement of employees
- human resource management
- application of psychological tests and assessment techniques
- employee performance review
- employee training
- management development
- employee motivation and productivity
- organizational climate
- employee attitude and morale measurement
- organizational change and development
- human resource and personnel policy planning
- job analysis and evaluation
- job design and enrichment
- employee counseling
- stress management

The goal of the graduate program is to develop expertise in applying the principles and practice of the science of psychology to improve the effectiveness and satisfaction of people at work. The program provides students with a knowledge of contemporary theory, research and practice in the areas listed above. Specific skills can be acquired through coordinating formal course work with an internship or practicum in an organizational setting. The practicum experience is for the student who is currently employed. The internship is served in one of several cooperating business, social service, health or government organizations. Both the internship and practicum receive graduate credit and are supervised by experienced full-time department faculty members.

Admission Policy

Applicants are expected to possess social and interpersonal characteristics that will support success in organizational settings.

Students who give evidence of a mature interest in the application of psychological principles to organizational problems and who hold an undergraduate degree from an accredited college or university are eligible for admission.

Applicants are required to complete a questionnaire and submit it directly to the Graduate School and may be required to submit scores from either the Miller Analogies Test or the Graduate Record Examination Aptitude Test.

An undergraduate major in psychology is not specifically required as a basis for consideration. However, all students are expected to have at least an introductory level understanding of psychological concepts, principles, and methods before taking courses in the master of arts in industrial/organizational psychology program. Mastery of the content of an introductory undergraduate statistics course is prerequisite to two of the six core courses.

See page 75 for the senior professional certificate in applications of psychology.

M.A., Industrial/ Organizational Psychology

A total of 39 credit hours is required of candidates for the degree of master of arts in industrial/organizational psychology. Candidates for this degree are required to complete 18 credit hours of required courses in the core curriculum. Another 21 credit hours of electives are chosen after consultation with the program coordinator, or a representative, in light of the student's academic and professional goals. Students may not complete more than nine credit hours of electives until they have satisfied the core requirements. Up to nine credit hours of electives may be taken in other departments, such as industrial engineering, economics, management, marketing, public management.

Transfer Credit

The transfer of credit from other institutions will be permitted subject to the Graduate School policy on transfer of credit detailed elsewhere in this catalog.

Thesis

Students electing to write a thesis must register for P 698 Thesis I, and P 699 Thesis II. The thesis must show ability to organize materials in a clear and original manner and present well-reasoned conclusions.

The thesis is written under the direction of the faculty member in charge of the thesis seminar or a faculty member with special competence in the subject matter of the thesis. The complete and final manuscript must be submitted to the thesis advisor prior to the end of the tenth week of the term in which the candidate expects to complete the requirements for the degree. Thesis preparation and submission must comply with the Graduate School policy on thesis/seminar project requirements detailed elsewhere in this catalog.

Program Options

In response to the different needs and levels of preparation of students in the program, the four following options are available:

Option 1 (Practicum) can be chosen by a student who is currently employed. This option allows the student to become involved in a project that is relevant to industrial/organizational psychology in his or her employing organization. The area of study will ordinarily be outside of the student's regular job assignment. It will be selected by the student's management in conjunction with the student and the faculty advisor.

Option 2 (Internship) gives the student with limited work experience the opportunity to serve an internship in an organizational setting. The content of the internship will be established jointly between the cooperating organization, the faculty advisor, and the student.

Option 3 (Thesis) will provide the student planning to pursue doctoral studies with an essential tool—the ability to do empirical research and report writing through the preparation of a thesis.

Option 4 (Electives) consists of elective courses selected under faculty advisement. The choice of electives is intended to provide the student with a broad interdisciplinary background, complementing the student's own academic training and interest.

Normally, the student should not begin work on any of the first three options until at least four core courses are completed.

Required Courses

EC 625	Industrial Relations	3
P 609	Research Methods*	3
P 619	Organizational Behavior	3
P 635	Assessment of Human Performance with Standardized Tests	3
P 640	Industrial Motivation and Morale	3
P 645	Seminar in Industrial/Organizational Psychology	3
	Elective options (see below)**	21
	Total credits	**39**

Elective Options

Option 1

P 678	Practicum I	3
P 679	Practicum II	3
	Electives**	15

Option 2

P 693	Organizational Internship I	3
P 694	Organizational Internship II	3
	Electives**	15

Option 3

P 698	Thesis I	3
P 699	Thesis II	3
	Electives**	15

Option 4

	Electives**	21

* Undergraduate preparation in statistics is prerequisite.

** The choice of electives is made in consultation with a departmental advisor in light of the student's academic and professional goals.

Industrial Relations

Coordinator: Frank A. Scalia, Professor of Management Science, Ph.D., Carnegie-Mellon University

Environmental forces over the past two decades have created a demand for greater sophistication and professionalism from those responsible for personnel functions within all organizations whether public or private, profit or non-profit, unionized or not. More and more companies and institutions are requiring the services of people conversant with both the large body of available tools and the constraints that have evolved during this period. The program leading to the master of science degree in industrial relations represents a flexible response to this demand.

Industrial relations, as a management and behavioral science discipline, is concerned with all aspects of the employment relationship and, in particular, with the organization's maintenance of the human resources necessary to achieve organizational objectives. As an academic discipline and profession, industrial relations is an interdisciplinary, problem-solving field that attempts to maintain harmony and resolve conflicts among the four major parties to the employment relationship—employees, employers, government and, where applicable, unions.

The M.S. in industrial relations program is aimed at people presently employed in or aspiring to positions in various kinds of organizations in the fields of employment, training and development, wage and salary administration, employee services and benefits, labor/management relations, job and organizational design, labor economics and manpower planning.

Because of the diversity of student interests and employment demand, the program is flexible. The required courses in the program are drawn from the disciplines of economics, management and psychology. There is a great deal of flexibility in elective courses including options in management, psychology, public administration, marketing, economics, accounting, quantitative analysis, industrial engineering and others. As a result the student will find it possible, to a large extent, to tailor the curriculum to his or her specific needs and interests.

Admission Policy

Admission is open to individuals holding a baccalaureate degree from an accredited institution of higher education. While not an absolute necessity, the undergraduate degree should preferably be in business administration, public administration or in a social or behavioral science (e.g., economics, history, political science, psychology, or sociology). Admission is also open to full-time employed professionals in personnel and industrial relations holding a baccalaureate degree in any field from an accredited institution.

Though admissions decisions are usually based on an applicant's undergraduate record, in exceptional cases the applicant may be required to submit scores from the Graduate Management Admissions Test (GMAT). A personal interview with the industrial relations program coordinator may also be required.

M.S., Industrial Relations

A minimum total of 39 graduate credit hours is required for the master of science degree in industrial relations. Of these, fifteen hours are in approved elective courses. A student may opt to complete a thesis in lieu of two elective courses.

While a sample of available elective courses is presented below, the complete and much lengthier list of pre-approved electives is available from the industrial relations program coordinator. It may also be possible to take, for elective credit, courses not presently on this list. In this case, however, approval of the coordinator is required.

Required Courses

EC 625	Industrial Relations	3
EC 627	Economics of Labor Relations	3
EC 687	Collective Bargaining	3
MG 637	Management	3
MG 645	Management of Human Resources	3
MG 678	Personnel Management Seminar	3
MG 679	Industrial Relations Seminar	3
P 619	Organizational Behavior	3
	Electives (Approved)	15
	Total credits	**39**

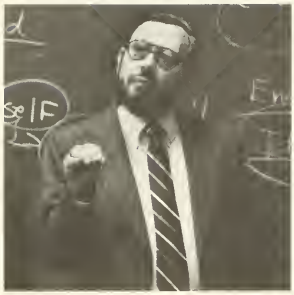
Electives

(Sample list. Complete list available from the industrial relations coordinator.)

A 609	State and Local Taxation
CO 621	The Communication Process
EC 629	Public Policies Toward Business
HM 630	Personnel and Labor Relations in Hotel and Restaurant Operations
IE 604	Management Systems
MG 640	Management of Health Care Organizations
MG 661	Development of Management Thought
MG 662	Organization Theory
MG 663	Leadership in Organizations
MG 665	Compensation Administration
P 620	Industrial Psychology
P 628	The Interview
P 635	Assessment of Human Performance with Standardized Tests
P 640	Industrial Motivation and Morale
P 641	Personnel Administration and Collective Bargaining in the Public Sector
PA 650	Administrative Law
QA 604	Probability and Statistics
SH 608	Industrial Hygiene Practices
SO 601	Minority Group Relations

Legal Studies

Coordinator: Joshua H. Sandman, Associate Professor of Political Science, Ph.D., New York University



In view of the increasing importance and complexity of law in society and its relevance to non-lawyers, the program is designed to provide expanded knowledge and understanding of the origins and applications of law in the modern world.

The program will explore the theoretical foundations of law and the structural foundations of American and international law, as well as more specific and technical application affecting modern institutions, corporations, and individuals. In addition, electives will permit concentrations in two major areas of law—Law and the Public Sector and Law and the Industrial Process.

The interdisciplinary program will examine the creation and functioning of law at the global, national and state levels among administrative bodies, regulatory agencies, legislatures, and the courts. Among the issue-areas covered are legislative law-making, lobbying, contracts, torts, occupational health and safety, collective bargaining, taxation, equal employment opportunity, and affirmative action.

M.A., Legal Studies

All students in the master of arts in legal studies program must earn a minimum of 42 credit hours, including 24 credits or required core courses. They should select 18 credits in a concentration, either Law and the Public Sector or Law and the Industrial Sector as outlined below.

Each student is expected to write a thesis or take a comprehensive examination in the last year of graduate study. Additional concentrations may be available at a later date. Students wishing to coordinate new concentrations with existing concentrations may do so upon the approval and advice of the coordinator.

Required Courses

PS 601	Constitutional Law	3
PS 602	Civil Liberties and Rights	3
PS 603	International Law	3
PS 610	Legal Methods I	3
PS 615	Jurisprudence	3
PS 625	Transnational Legal Structure	3
PS 655	Conflict Resolution	3
LA 673	Business Law I: Contracts and Sales	3
	Concentration	18
	Total credits	**42**

Concentrations

Concentration I: Law and the Public Sector

PS 608	The Legislative Process	3
	Plus five courses from the following:	
PS 604	Human Rights and the Law	3
PS 605	Criminal Law	3
PS 613	Political Justice	3
PS 616	Urban Government	3
PS 628	Change and Government	3
PS 633	The Political Process and the Aged	3
PS 635	Law and Public Health	3
PS 652	Legal Administration	3
PS 670	Special Topics	3
PS 698-99	Thesis I and II	6
CE 606	Environmental Law and Legislation	3
HU 631	Culture and Ethics in the Modern Age	3
PA 650	Administrative Law	3
SO 649	Seminar in Health and Social Policy	3
	Total credits	**18**

Concentration II: Law and the Industrial Sector

PS 626	Decision Making in the Political Process	3
	Plus five courses from the following:	
PS 612	Contracts, Torts and the Practice of Law	3
PS 617	Law, Science and Ethics	3
PS 645	Government and the Industrial Sector	3
PS 670	Special Topics	3
PS 698-99	Thesis I and II	3
PA 650	Administrative Law	3
A 601	Federal Income Taxation I	3
A 604	Corporate Income Taxation I	3
A 609	State and Local Taxation	3
A 614	Federal Tax Practice and Procedure	3
EC 629	Public Policies Toward Business	3
EC 687	Collective Bargaining	3
HU 641	Technology and Human Values	3
LA 674	Business Law II: Business Organizations and Negotiable Instruments	3
MG 665	Compensation Administration	3
SH 620	Occupational Safety and Health Law	2
SH 630	Product Safety and Liability	3
	Total credits	**18**

Mechanical Engineering

Acting Coordinator: John Sarris, Associate Professor of Mechanical Engineering, Ph.D., Tufts University

This program is intended to meet the needs of professionally employed engineers and scientists for academic work beyond the baccalaureate level. It has been designed to increase competence in modern analysis and synthesis techniques as they apply to engineering design.

The program centers on a core sequence which all students are expected to take. The core courses contain advanced methods of analysis and design which are of common interest in engineering work. Students complete the program by electing a series of courses in mechanical engineering that is particularly suited to their current professional interests. Early in the program, students, with the approval of their advisors, prepare a detailed plan insuring an overall educational experience that is integrated and logical.

All decisions regarding both core and elective requirements are subject to final approval of the student's advisor.

M.S., Mechanical Engineering

A minimum of 39 credits must be completed to earn the master of science degree in mechanical engineering. Transfer of credit from other institutions will be permitted subject to the Graduate School policy on transfer credit. A thesis is optional but highly recommended for students wishing to study in depth particular areas of interest under the guidance of a faculty member. Thesis topics should be approved by the faculty advisor when the student has completed 18-21 graduate credits.* Thesis preparation and submission must comply with Graduate School policy on theses. The final manuscript must be submitted to the advisor prior to the end of the tenth week of the term in which the candidate expects to complete the requirements for the degree. Students who elect not to write a thesis must take two additional M.E. elective courses and a comprehensive examination based on the required core of courses.

Required Courses

M 624	Applied Mathematics	3
ME 602	Mechanical Engineering Analysis I	3
ME 604	Mechanical Engineering Analysis II	3
ME 605	Finite Element Methods in Engineering	3
ME 615	Theory of Elasticity	3
ME 625	Mechanics of Continua	3
ME 630	Advanced Fluid Mechanics	3
ME 698-699	Thesis I and II *or* two additional M.E. and comprehensive examination	6
	Electives	12
	Total credits	**39**

Elective Courses

M 620	Numerical Analysis	3
ME 610	Advanced Dynamics	3
ME 611	System Vibrations	3
ME 620	Classical Thermodynamics	3
ME 622	Statistical Mechanics	3
ME 628	Modern Materials	3
ME 632	Advanced Heat Transfer	3
ME 645	Computational Fluid Dynamics and Heat Transfer	3
ME 670	Special Topics—Mechanical Engineering	3
ME 695	Independent Study I	3
ME 696	Independent Study II	3

*Contact the coordinator for the name of the advisor for these specialized areas: acoustics/aerodynamics, fluids/biomechanics/design, gas dynamics, heat transfer/thermodynamics, mechanics/materials, solids/numerical techniques, vibrations/systems analysis.

Occupational Safety and Health Management

Coordinator: Douglas C. Gray, Associate Professor of Occupational Safety and Health Management, Ph.D., University of Cincinnati

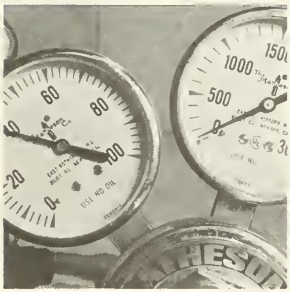
The master of science degree program in occupational safety and health management is designed to provide the core technical knowledge and the managerial skills to administrate a safety and health program, particularly at the corporate level.

The program is designed to accommodate both the active practitioner in the OSH field and the novice who aspires to a career in this dynamic occupation. This flexibility is provided through a program sequence of 30 credit hours of core courses and 18 credit hours of elective courses offered in both science/engineering and management areas.

Admissions Policy

Admission to the master of science in occupational safety and health management program is open to persons who hold a baccalaureate degree from an accredited institution. An undergraduate grade point average of at least 2.5 on a 4.0 scale is required for provisional acceptance, 3.0 for full matriculation. Undergraduate courses in general chemistry, general physics, biology, statistics, psychology, and accounting are required. The degree candidate may be required to submit scores from the Graduate Record Examination. Students who do not meet all requirements will be evaluated on an individual basis.

M.S., Occupational Safety and Health Management



Candidates are required to complete 48 credit hours of graduate work. Transfer of credit from other institutions will be permitted subject to the Graduate School policy on transfer credit noted elsewhere in this catalog. Consideration for waiver of core courses on the basis of undergraduate experience is at the discretion of the program coordinator.

The student has the option of selecting twelve credit hours in electives with the approval of the faculty advisor in order to graduate, students also must elect either six hours from SH 693/694 Internship, SH 695/696 Independent Study, or SH 698/699 Thesis in accordance with the Graduate School requirements on thesis detailed elsewhere in this catalog.

Required Courses

SH 602	Safety Organization and Administration	3
SH 605	Industrial Safety Engineering	3
SH 608	Industrial Hygiene Practices	3
SH 611	OSH Seminar	1
SH 615	Industrial Toxicology	3
SH 620	Occupational Safety and Health Law	2
SH 630	Product Safety and Liability	3
IE 651	Human Engineering I	3
MG 637	Management	3
P 619	Organizational Behavior	3
QA 604	Probability and Statistics	3
	Electives	18
	Total credits	**48**

Elective Courses

CE 602	Wastewater Treatment	3
CH 601	Environmental Chemistry	3
IE 612	Managerial Interactions I	3
MG 664	Organizational Effectiveness	3
MG 678	Personnel Management Seminar	3
P 640	Industrial Motivation and Morale	3
SC 603	Air Pollution	3
SC 610	General Environmental Health	3
SH 660	Industrial Ventilation	3
SH 670	Selected Topics	3
SH 690-691	Research Project I and II	1-3 each
SH 693-694	OSH Internship I and II	1-3 each
SH 695-696	Independent Study I and II	1-3 each
SH 698-699	Thesis I and II	6

Operations Research

Coordinator: Ira H. Kleinfeld, Associate Professor of Industrial Engineering, Eng. Sc.D, Columbia University

The master of science in operations research curriculum provides thorough coverage of the theory, methodology and application of the techniques of operations research and systems analysis. The program is designed to prepare qualified applicants from diverse backgrounds to deal with major social, industrial and business problems.

M.S., Operations Research

The basic program consists of 48 credit hours. The transfer of credit from other institutions will be permitted subject to the Graduate School policy on transfer credit detailed elsewhere in this catalog. Required courses may be waived on the basis of undergraduate courses taken at accredited institutions. All waivers must be approved in writing by the Department of Industrial Engineering and are contingent upon subsequent academic performance. In some cases, the coordinator may permit substitution of relevant courses in place of the required courses.

Seminar Project

The master of science in operations research program requires all students to complete IE 690 Seminar Project. This requirement is met by the preparation of a relevant seminar project report, prepared under the direction of a faculty advisor. The complete and final manuscript must be submitted to the project advisor prior to the end of the tenth week of the term in which the candidate expects to complete the requirements for his degree. For further specification see *Research Projects, Seminar Projects and Independent Study* requirements detailed elsewhere in this catalog. It is suggested that a student begin work on the seminar project after having completed at least 15 credit hours.

In certain cases, students who routinely complete projects similar to the required seminar project as a part of their professional duties may petition to satisfy the seminar project requirement by taking two advanced industrial engineering electives in place of the project. Such a substitution must have the prior written approval of the program coordinator.

Required Courses

IE 601	Introduction to Operations Research/ Management Science	3
IE 603F	Introduction to Digital Computers (FORTRAN)	3
IE 607	Probability Theory	3
IE 621	Linear Programming	3
IE 622	Queuing Theory	3
IE 685	Theory of Optimization	3
IE 686	Inventory Analysis	3
IE 688	Design of Experiments	3
IE 690	Seminar Project	3
EC 603	Microeconomic Analysis, *or*	
EC 604	Macroeconomic Analysis	3
M 610	Fundamentals of Calculus and Linear Algebra	3
	Electives (IE, Math, or EE)	6
	Electives	9
	Total credits	**48**

Public Administration

Coordinator: Lynn H. Monahan, Associate Professor of Criminal Justice, Ph.D., University of Oregon

The general purpose of the master of public administration degree at the University of New Haven is the training of men and women at the graduate level for public service careers. Specifically, the program strives to:

- equip students with modern analytical and quantitative tools of decision making and their application to complex problems of government and non-profit organizations;
- expose students to the wide range of administrative and managerial problems and responsibilities in the public sector; and
- increase the student's knowledge and skills in the particular management functions of budgeting, planning, public policy formulation, public finance, public personnel administration, collective bargaining and research.

M.P.A.

Forty-two graduate credit hours are required of candidates for this degree. Of the 15 credit hours of electives in the M.P.A. program, six credit hours may be taken in graduate courses offered in other programs such as psychology, criminal justice, economics, and industrial engineering.

See page 79 for the senior professional certificate in public management.

Required Courses

PA 601	Principles of Public Administration	3
PA 602	Public Policy Formulation and Implementation	3
PA 604	Communities and Social Change	3
PA 611	Research Methods in Public Administration	3
PA 620	Personnel Administration and Collective Bargaining in the Public Sector	3
PA 625	Administrative Behavior	3
PA 632	Public Finance and Budgeting	3
PA 690	Research Seminar	3
EC 608	Economics for Public Administrators	3
	Electives	15
	Total credits	**42**

Concentration

The concentration in the master of public administration program is designed to provide career-oriented structure for students with well-formed career interests. The concentration in health care management is the first concentration introduced into the program. The department expects to develop additional concentrations over the next several years.

Concentration in Health Care Management

Advisor: Lynn H. Monahan, Associate Professor of Criminal Justice, Ph.D., University of Oregon

The concentration in health care management is designed for those individuals currently in health care management or those who anticipate a career in health care management. Courses are designed to prepare students with the conceptual and practical skills necessary for the management of a health care organization.

Students following the health care concentration will take the core curriculum of 10 courses and follow the health care concentration of five courses for their five elective courses.

MG 640	Management of Health Care Organizations	3
PA 641	Financial Management of Health Care Organizations	3
PA 643	Health and Institutional Planning	3
PS 635	Law and Public Health	3

Plus one course chosen from among the following:

PA 642	Health Care Delivery Systems	3
PA 644	Administration of Programs and Services for the Aged	3
PA 645	Health Care Economics and Finance	3
PA 670	Selected Topics	3
	Total credits	**15**

Taxation

Coordinator: Robert E. Wnek, Assistant Professor of Accounting and Finance, CPA, J.D., Delaware Law School of Widener College

The decision by government to utilize its taxing authority to pursue a variety of economic and social goals has led to the development of a complex body of "tax law." Given the dynamic state of society's economic and social goals, the body of "tax law" characteristically exists in a continual state of change.

The complexity of "tax law" is significant not only because of its impact upon accomplishing society's goals but also because of its influence upon the economic decison-making process. Tax consequences have been and will continue to be an important financial consideration.

Program Objectives

In recognition of the above, a need to prepare technically competent individuals for careers in the field of taxation has developed. Owing to the complex and dynamic nature of "tax law," it appears appropriate to conduct this preparation at an advanced level of inquiry with an emphasis upon examining the issues of current interest in taxation. Accordingly, the master of science program in taxation has been designed as a framework to accomplish the following structure of objectives:

- to prepare students for technical competence in understanding and interpreting tax law;
- to familiarize students with the administrative structure and procedures of the Internal Revenue Service;
- to inform students about approaches to independent research in the field of tax law;
- to offer an understanding of the role tax law plays in social and economic policy.

Given the above objectives, the master of science program in taxation provides a framework through which advanced and timely tax training can be acquired by experienced professionals (accountants and attorneys) practicing in the field of taxation, as well as individuals seeking to prepare themselves for entry into career positions in taxation.

Admission Policy

Admission to matriculation in the program is available to CPA's, attorneys, and persons holding an undergraduate degree from an accredited institution, preferably, but not exclusively, in accounting or in business administration with a major in accounting. Persons holding other than the above degrees will be required to take a number of selected undergraduate courses as a condition for admission. Admission is based primarily on an applicant's undergraduate record; however, the promise of academic success is the essential factor for admission. In support of their application, persons may submit their scores from the Graduate Management Admissions Test (GMAT). An applicant may be required to take this test.

M.S., Taxation

A minimum total of 36 credits is required for the master of science in taxation. The 36 credits will include 24 credits from required core courses and 12 credits from electives. The transfer of credit from other institutions will be permitted subject to the Graduate School policy on transfer credit detailed elsewhere in this catalog.

See page 80 for the senior professional certificate in taxation.

Required Courses

A 601	Federal Income Taxation I	3
A 602	Federal Income Taxation II	3
A 604	Corporate Income Taxation I	3
A 605	Corporate Income Taxation II	3
A 607	Tax Accounting	3
A 608	Estate and Gift Taxation	3
A 614	Federal Tax Practice and Procedure	3
A 615	Research Project in Federal Income Taxation	3
	Electives	12
	Total credits	**36**

Elective Courses

A 603	Federal Income Taxation III	3
A 606	Corporate Income Taxation III	3
A 609	State and Local Taxation	3
A 610	Consolidated Returns	3
A 611	Income Taxation of Estates and Trusts	3
A 612	International Taxation	3
A 613	Taxation of Partnerships and Partners	3

For practitioners wishing to improve or update their tax skills but uncertain about pursuing a master's in taxation, two senior professional certificate programs are offered: Taxation of Individuals (Option I) and Taxation of Corporations (Option II), as described on page 80.

Practicing CPA's in need of continuing education credits and others generally seeking to expand their tax background should consider this alternative.

Senior Professional Certificates

This program is limited to those already holding an advanced degree who want additional graduate study in a coherent program, but do not want to work toward another advanced degree.

Since the senior professional certificate is not a degree, a student may transfer credits earned for a certificate into a master's program at any time, subject to the requirements of the master's degree and the decision of the coordinator of the master's program, and to acceptance in the master's program. Professional certificates, for those without advanced degrees, are available in criminal justice and forensic science.

Students completing work in a certificate program do not attend commencement but will receive a certificate. A petition for certification must be filed with the graduate registrar and the appropriate fee paid. When the course work is reviewed and found complete, the certificate will be mailed to the student.

Senior Professional Certificate Requirements

The program consists of 15 or 18 credits, depending upon the area chosen. Students, having chosen their area of study, should contact the advisor who is listed for that particular area. Students must meet all course prerequisite requirements.

Programs of Study

Sixteen senior professional certificates are offered. Four programs allow options to choose a particular specialty. The programs are the following:

Accounting
- I: Financial Accounting
- II: Managerial Accounting
- III: Accounting Information Systems

Applications of Psychology
Computer Applications and Information Systems
Dietetics Administration
Economic Forecasting
Finance
General Management
Gerontology
Hotel and Restaurant Administration
Human Resources Management
International Business

Marketing
- I: Marketing
- II: Quantitative Techniques in Marketing

Media in Business

Public Management
- I: Survey of the Field
- II: Urban and Regional Planning and Management
- III: Public Personnel Management

Quantitative Analysis

Taxation
- I: Taxation of Individuals
- II: Taxation of Corporations

Accounting

Advisor: Robert E. Wnek, Assistant Professor of Accounting and Finance, CPA

The certificates in accounting are recommended to students and professionals whose education already includes an accounting degree and who desire to pursue accounting at an advanced level without necessarily enrolling in the full graduate program. It is especially recommended to certified public accountants who desire to obtain continuing professional education credits in an academic environment.

Option I: Financial Accounting*

Any five from the following:

A 650	Advanced Accounting Theory	3
A 651	Financial Accounting Seminar	3
A 652	Advanced Auditing	3
A 653	Accounting for Not-for-Profit Organization	3
A 654	Financial Statements: Reporting and Analysis	3
A 656	International Accounting	3
	Total credits	**15**

Option II: Managerial Accounting*

Any five from the following:

A 621	Managerial Accounting	3
A 641	Accounting Information Systems	3
A 642	Operational Auditing	3
A 661	Managerial Accounting Seminar	3
FI 615	Finance	3
FI 645	Corporate Financial Theory	3
FI 651	Portfolio Management and Capital Market Analysis	3
	Total credits	**15**

Option III: Accounting Information Systems*

A 641	Accounting Information Systems	3
A 642	Operational Auditing	3
A 652	Advanced Auditing	3
	Plus any two accounting systems or computer science courses	6
	Total credits	**15**

*Other courses may be substituted by consent of the coordinator of the program.

Applications of Psychology

Advisor: Thomas L. Mentzer, Ph.D., Professor of Psychology

The senior professional certificate in applications of psychology is designed to assist professionals who wish to acquire specific kinds of skills in areas dealing with human services or personnel functions. This program can be tailored to the needs of either one whose master's degree is in a non-psychological field or one with a master's degree in psychology who wishes to broaden skills to a new area of psychology. Courses will be selected depending upon the student's career objectives and academic preparation. These courses may be from the following list, but other courses, independent study, or special topics courses may be chosen where appropriate.

Any five of the following:

P 610	Program Evaluation	3
P 621	Behavior Modification	3
P 623	Psychology of the Small Group	3
P 627	Attitude and Opinion Measurement	3
P 628	The Interview	3
P 629	Introduction to Counseling	3
P 630	Psychology of Personality	3
P 631	Social Psychology	3
P 632	Group Dynamics and Group Treatment	3
P 633	Problems of Drug Abuse	3
P 636	Abnormal Psychology	3
P 638	Psychology of Communication and Opinion Change	3
P 641	Personnel Development and Training	3
P 642	Organizational Change and Development	3
P 650	Ecological Psychology	3
	Total credits	**15**

Computer Applications and Information Systems

Advisor: Roger G. Frey, Ph.D., Associate Professor of Industrial Engineering

This certificate covers programming and systems with a business systems emphasis, preparing the student to carry out systems studies, and to interact knowledgeably with programmers and computer systems specialists.

IE 604	Management Systems	3
IE 605	Advanced Business Programming	3
IE 610	Computer Systems Selection	3
IE 614	Data Information Systems	3
IE 684	Multiprogramming Systems	3
	Total credits	**15**

Dietetics Administration

Advisor: Ronald A. Usiewicz, Ph.D., Associate Professor of Hotel/Restaurant Management; Dietetics and Tourism Administration

This certificate is designed for those students who wish to become effective professional managers in health care. It is designed to expand the student's awareness of organizational structures and to underscore the importance of those financial, economic, marketing and statistical factors which contribute to the success of a health care organization.

HM 610	Content Seminar in Dietetics	3
HM 635	Applied Dietetics for Health Care Professionals	3
HM 670	Special Topics in Dietetics	3
HM 690	Research in Dietetics	3
SC 615	Life Cycle Nutrition	3
SC 616	Geriatric and Advanced Nutrition	3
	Total credits	**18**

Economic Forecasting

Advisor: Joseph A. Parker, Ph.D., Professor of Economics

Students enrolled in this program are expected to have knowledge of computer use, especially FORTRAN. The certificate is designed to provide preparation for careers in forecasting and modeling.

EC 604	Macroeconomic Analysis	3
EC 645	Seminar in Macroeconomic Policy	3
EC 653	Econometrics	3
QA 607	Forecasting	3
	Plus one of the following:	
EC 629	Public Policies Toward Business	3
EC 630	Structure of American Industry	3
EC 633	Managerial Economics	3
	Total credits	**15**

Finance*

Advisor: Robert Rainish, Ph.D., Associate Professor of Accounting and Finance

The goal of the finance certificate is to prepare individuals for the expanding sector of financial services and modern corporate financial management. The program stresses the understanding of the conceptual foundations of finance and uses of analytical techniques, with special emphasis on the implications and applicatons of the financial concepts. Senior certificate candidates are required to meet the prerequisites for FI 615. It is *strongly recommended* that the individual contacts as early as possible the finance coordinator to program the appropriate sequence of courses.

FI 615	Finance	3
	Choose any four from the following:	
FI 617	Financial Institutions and Capital Markets	3
FI 619	Monetary and Central Banking Policy	3
FI 620	Working Capital Management and Planning	3
FI 645	Corporate Financial Theory	3
FI 649	Security Analysis	3
FI 651	Portfolio Theory and Capital Market Analysis	3
FI 655	Commodity Market Analysis	3
	Total credits	**15**

* Other courses may be substituted by consent of the coordinator of the program.

General Management

Advisor: Shiv L. Sawhney, Ph.D., Professor of Management Science

The certificate in general management is designed to develop students' conceptual knowledge and skills in formulating corporate strategy to pursue the business organization's purpose or purposes, and determining structural and resource requirements. The program focuses on concepts and processes useful in relation to general management, and functional responsibilities in coordinating and directing the organizational effort in our ever-changing economic environment. Please note that MK 609 and MG 637 are prerequisites for the certificate.

MG 661	Development of Management Thought	3
MG 664	Organizational Effectiveness	3
MG 669	Business Policy and Strategy	3
	and three of the following:	
MG 660	Comparative Management	3
MG 662	Organization Theory	3
MG 663	Leadership in Organizations	3
MG 675	Readings in Management	3
MG 680	Current Topics in Business Administration	3
	Total credits	**18**

Gerontology

Advisor: Judith B. Gordon, Ph.D., Associate Professor of Sociology

The senior professional certificate in gerontology is designed to enhance existing skills of professionals working with the elderly in social work, law, medicine, nursing, and other related fields.

Students are expected to plan a sequence of courses with the faculty advisor at the start of the program. Elective courses will be selected depending upon a student's interests, career objectives and academic preparation.

P 672	Psychology of the Middle and Later Years	3
SO 651	Social Gerontology	3
SO 695	Independent Study I	3
SW 652	Human Services and the Elderly II: Programs, Planning, Policies	3
	Plus two electives, by advisement	6
	Total credits	**18**

Hotel and Restaurant Management

Advisor: Ronald A. Usiewicz, Ph.D., Associate Professor of Hotel/Restaurant Management; Dietetics and Tourism Administration

This certificate is designed to develop analytical skills necessary for the competent and profitable operation of a hospitality facility and to expand the student's awareness in and to underscore the importance of those financial, economic, marketing and statistical factors which contribute to the success of a hospitality operation.

HM 610	Content Seminar in Hotel and Restaurant Management	3
HM 625	Supervisory and Leadership Development in Hotel and Restaurant Operations	3
HM 630	Personnel and Labor Relations in Hotel and Restaurant Operations	3
HM 655	Development of Hotel/Restaurant/Institutional Operations	3
HM 670	Special Topics in Hotel and Restaurant Management	3
HM 690	Research in Hotel and Restaurant Management	3
	Total credits	**18**

Human Resources Management

Advisor: Frank A. Scalia, Ph.D., Professor of Management Science

This certificate is designed for the personnel professional or the individual presently in a different field who aspires to the personnel function. For the individual whose previous degrees are not related to human resource management or who is looking for an update without necessarily pursuing a specialized degree, this program will be worthy of consideration.

MG 645	Management of Human Resources	3
MG 678	Personnel Management Seminar	3
	and four of the following:	
EC 625	Industrial Relations	3
EC 627	Economics of Labor Relations	3
EC 687	Collective Bargaining	3
MG 663	Leadership in Organizations	3
MG 665	Compensation Administration	3
MG 679	Industrial Relations Seminar	3
P 627	Attitude and Opinion Measurement	3
P 628	The Interview	3
P 641	Personnel Development & Training	3
PA 620	Personnel Administration and Collective Bargaining in the Public Sector	3
	Total credits	**18**

Note: Course substitutions may be permitted depending upon the background of the student and subject to the approval of the advisor.

International Business

Advisor: Thomas Katsaros, Ph.D., Professor of Marketing

This certificate is designed to prepare future managers to deal with the current problems and methods of analysis related to international business. This includes basic techniques and skills, such as adapting to new political and cultural environments, which are not normally covered by traditional courses.

IB 643	International Business	3
IB 644	International Trade and Finance	3
	Plus any three from the following:	
IB 645	Comparative International Business Environments	3
IB 651	International Marketing	3
IB 652	Multinational Business Management	3
MG 660	Comparative Management	3
EC 641	International Economics	3
	Total credits	**15**

Marketing

Advisor: Shiv L. Sawhney, Ph.D., Professor of Management Science

The certificate in marketing allows the student to develop a deeper understanding of marketing phenomena and analytical skills. Specific emphasis is given to the development of content knowledge and skills necessary for operating managers of the marketing function. It is suggested that the elective courses be taken first, followed by Marketing Research and, finally, Marketing Management. Please note that MK 609 and MG 637 are prerequisites for the certificate.

Option I: Marketing

MK 639	Marketing Research and Information Systems	3
MK 641	Marketing Management	3
	Plus one course in International Business and two courses from the following:	
MK 616	Buyer Behavior	3
MK 643	Product Management	3
MK 644	Consumerism	3
MK 645	Distribution Strategy	3
MK 680	Marketing Workshop	3
MG 669	Business Policy and Strategy	3
	Total credits	**15**

This specialization will enable you to utilize the latest quantitative methods to redefine and to plan the corporate scope of a business. It is critical for problem-solving at both strategic and tactical levels. Particular emphasis is placed on marketing distribution problems by the intensive study of transportation and logistics.

Option II: Quantitative Techniques in Marketing

IE 603F	Introduction to Digital Computers: FORTRAN	3
QA 604	Probability and Statistics	3
	Plus any three from the following:	
IE 615	Transportation and Distribution	3
MK 639	Marketing Research and Information Systems	3
MK 641	Marketing Management	3
QA 607	Forecasting	3
	Total credits	**15**

Media in Business

Advisor: Steven Raucher, Ph.D., Associate Professor of Communication

The proper use of media is one of the roads to success for any business, large or small. Professionals with media skills can be found in advertising, marketing, personnel and management positions in just about all kinds of business entities. This program gives the student those skills, theories and techniques, desirable and necessary within the corporate environment. Stressing media in terms of audio-visual use, media presentation, and training, professionalism becomes the focus of the program. The student will be introduced to different media and all stages of production, from script to transparency to video. As a final course project, the student will link up with a corporate sponsor to design and produce a specific media presentation.

CO 601	Basics of Business Media Production Techniques	3
CO 605	Planning Audio Visual Systems for Business	3
CO 609	Scripting the Media Presentation	3
CO 613	Media Presentations for Business	3
CO 621	The Communication Process	3
	Total credits	**15**

Note: CO 601 is a prerequisite to CO 613.

Public Management

Advisor: Lynn H. Monahan, Ph.D., Associate Professor of Criminal Justice

The certificates in public management are designed to provide a broad overview of the most up-to-date thinking in public management today. Courses emphasize conceptual and analytic skill building. Students may opt for either a survey of the field, urban and regional planning and management, or public personnel management.

Option I: Survey of the Field

Choose any five from the following:

EC 665	Urban and Regional Economic Development	3
PS 608	The Legislative Process	3
PA 611	Research Methods in Public Administration	3
PA 620	Personnel Administration and Collective Bargaining in the Public Sector	3
PA 625	Administrative Behavior	3
PA 630	Governmental Accounting	3
PA 632	Public Finance and Budgeting	3
PA 660	Urban Planning: Theory and Practice	3
	Total credits	**15**

Option II: Urban and Regional Planning and Management

Choose any five from the following:

EC 665	Urban and Regional Economic Development	3
PA 630	Governmental Accounting	3
PA 634	Problems of Municipal Management	3
PA 660	Urban Planning: Theory and Practice	3
PA 661	Problems of Metropolitan Areas	3
PS 616	Urban Government	3
	Total credits	**15**

Option III: Public Personnel Management

EC 625	Industrial Relations	3
MG 645	Management of Human Resources	3
PA 620	Personnel Administration and Collective Bargaining in the Public Sector	3
PA 625	Administrative Behavior	3
	and one from the following:	
MG 665	Compensation Administration	3
P 627	Attitude and Opinion Measurement	3
P 635	Assessment of Human Performance with Standardized Tests	3
	Total credits	**15**

Quantitative Analysis

Advisor: Joseph A. Parker, Ph.D., Professor of Economics

IE 604	Management Systems	3
QA 604	Probability and Statistics	3
QA 605	Advanced Statistics	3
QA 606	Advanced Management Science	3
QA 607	Forecasting	3
	Total credits	**15**

Taxation

Advisor: Robert E. Wnek, Assistant Professor of Accounting and Finance, CPA

For practitioners who wish to improve or up-date their tax skills, but do not wish to pursue a master's in taxation now, two senior professional certificates programs are offered: Taxation of Individuals (Option I) and Taxation of Corporations (Option II), both described below.

Practicing C.P.A.'s needing continuing education credits and others seeking to expand their tax background should consider these alternatives.

Option I: Taxation of Individuals*

A 601	Federal Income Taxation I	3
A 602	Federal Income Taxation II	3
A 603	Federal Income Taxation III	3
A 608	Estate and Gift Taxation	3
	Plus one taxation elective	3
	Total credits	**15**

Option II: Taxation of Corporations*

A 604	Corporate Income Taxation I	3
A 605	Corporate Income Taxation II	3
A 606	Corporate Income Taxation III	3
A 610	Consolidated Returns	3
	Plus one taxation elective	3
	Total credits	**15**

* Other courses may be substituted by consent of the coordinator of the program.

COURSES

Unless otherwise indicated, all graduate courses carry three credit hours.

Accounting

A 600 Accounting
The principles and procedures underlying the generation of financial accounting information. No credit.

A 601 Federal Income Taxation I
A study of tax policy and the basic principles of the federal income tax law taught at an advanced level of inquiry. Coverage entails the key concepts of gross income, adjusted gross income, deductions, exemptions, credits, and special tax computations, with special attention given to the provisions of the Internal Revenue Code affecting individual taxpayers.

A 602 Federal Income Taxation II
Prerequisite: A 601. A continuation of Federal Income Taxation I emphasizing the basic provisions concerning dispositions of property: analysis of basis, recognition of gain or loss, capital asset transactions and non-recognition exchanges. Coverage extended to deferred payment sales and depreciation recapture.

A 603 Federal Income Taxation III
Prerequisite: A 602. An examination of the fundamentals of the federal taxation of deferred compensation. The course will focus on qualified and nonqualified retirement plans, individual and self-employed retirement plans and tax deferred annuities as developed by the Employment Retirement Income Security Act of 1974, and subsequent legislation. Deferred executive compensation arrangements, stock options, restricted property and various employee benefit plans will also be analyzed.

A 604 Corporate Income Taxation I
Prerequisite: A 602. A foundation course analyzing the basic federal income tax provisions affecting corporations and shareholders. Course coverage includes organization of the corporation, corporate capital structure, corporate distributions, stock redemptions, bail-out techniques and liquidations.

A 605 Corporate Income Taxation II
Prerequisite: A 604. Advanced study in the corporate tax area including subchapter S corporations, collapsible corporations, accumulated earnings tax, affiliated corporations and carryover of corporate tax attributes.

A 606 Corporate Income Taxation III
Prerequisite: A 604. A detailed analysis of the federal income tax rules covering corporate reorganizations and divisions. Also discussed are some of the nontax aspects of corporate reorganizations such as S.E.C., anti-trust, and business reasons for choice of particular method.

A 607 Tax Accounting
Prerequisite: A 601. Investigation of such areas as: problems of allocating income and deductions to the proper tax year, permissible tax accounting methods, depreciation, inventory methods, individual net operating losses, change in accounting method and comparison of business and tax accounting principles.

A 608 Estate and Gift Taxation
A comprehensive introduction to, and analysis of, the federal estate and gift tax laws including basic principles of estate planning. Procedures for preparation of the estate and gift tax returns are treated. Coverage is also given to state death and inheritance taxes.

A 609 State and Local Taxation
The tax problems encountered at the state and local level by businesses engaged in interstate commerce. Federal limitations on the taxation of multistate enterprises and jurisdictional problems are examined. Specific areas covered are: license to do business, net income, franchise, gross receipts, property, and sales and use taxes. Apportionment problems are examined in detail.

A 610 Consolidated Returns
Prerequisite: A 604. A thorough analysis of the federal consolidated tax return provisions including eligibility and whether to file a consolidated return; intercompany transactions and deferral concepts; basis in the disposition of stock of a subsidiary; computation of earnings and profits; and mechanics of preparing the consolidated return.

A 611 Income Taxation of Estates and Trusts

Prerequisite: A 602. Federal income taxation of estates, trusts, grantors, and beneficiaries. Topics are simple and complex trusts, throwback rules, taxable and distributable net income, assignment of income concepts and income in respect of a decedent, preparation of the estate and trust returns.

A 612 International Taxation

Prerequisite: A 604. Consideration of the federal income tax treatment of nonresident aliens and foreign corporations and the foreign income of U.S. residents and domestic corporations; comparison of alternative methods of engaging in operations abroad; foreign tax credit; allocations under code Section 482; Section 367 rulings; and the effect of tax treaties.

A 613 Taxation of Partnerships and Partners

Prerequisite: A 602. A study of the federal income tax problems encountered in the formation and operation of a partnership, including computations of taxable income, sale of a partnership interest, withdrawal of a partner, death or retirement of a partner, distribution of partnership assets, and basis adjustments.

A 614 Federal Tax Practice and Procedure

Prerequisite: A 601. A study of the history and organization of the Internal Revenue Service, the selection of returns for audit and the review steps at the administrative level. Code provisions covered will include: filing requirements, statutory notices, restriction on assessment, statute of limitations, refund procedures, waivers, closing agreements, protests and rulings.

A 615 Research Project in Federal Income Taxation

Prerequisite: 15 graduate hours in taxation. This course is devoted to a study of the techniques and tools of tax research. Reference sources include tax loose-leaf services, I.R.S. cumulative bulletins, court cases, congressional committee reports, textbooks, published articles. Mini research projects will be assigned for written submission.

A 621 Managerial Accounting

Prerequisite: A 600 or 6 credits in financial accounting. Accounting analysis for the managerial functions of planning, controlling and evaluating the performance of the business firm.

A 641 Accounting Information Systems

Prerequisite: A 621. An examination of the function and limitations of internal accounting information systems and their relationship to other decision-oriented business information systems.

A 642 Operational Auditing

Prerequisite: A 621. An analysis of the principles underlying and the procedures applying the function of auditing the results of firm-related business decisions.

A 650 Advanced Accounting Theory

Prerequisite: 6 hrs. of intermediate accounting. Considers the theoretical aspects of accepted accounting principles and their significance as a frame of reference for the evaluation of accounting practices. Considerable attention is focused on the role of regulatory agencies and professional accounting organizations with regard to their influences upon accounting theory and practice.

A 651 Financial Accounting Seminar

Prerequisite: A 650. An examination and evaluation of current literature in external accounting issues and related fields.

A 652 Advanced Auditing

Prerequisite: 3 hours of auditing. An analysis of the contemporary problems surrounding the attest function performed by the professional independent auditor. EDP auditing is examined in depth.

A 653 Accounting for the Not-for-Profit Organization

Prerequisite: 6 hrs. of intermediate accounting. An intensive examination of the contemporary views toward financial reporting for the not-for-profit organizations.

A 654 Financial Statements: Reporting and Analysis

Prerequisite: FI 651. An examination of financial reporting practices for financial statement analyses in view of modern theoretical and empirical financial decision-making research.

A 656 International Accounting

Prerequisite: 6 hrs. of intermediate accounting. An analysis of the literature related to the current and growing interest in the development of accounting standards for business enterprises throughout the world.

A 661 Managerial Accounting Seminar

Prerequisite: A 621. An examination and evaluation of current literature in internal accounting issues and related fields.

A 670 Selected Topics

A study of selected issues of particular interest to the students and instructor. Course may be taken more than once.

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A 690 Research Project
Prerequisite: 15 graduate hours or permission of the instructor. Independent study under the supervision of an advisor.

A 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

A 696 Independent Study II
A continuation of Independent Study I.

A 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

A 699 Thesis II
A continuation of Thesis I.

Civil and Environmental Engineering

CE 601 Water Treatment
Advanced design principles and practices in water treatment processes; study of unit processes and operations; water treatment plant design; methods of population projection; water distribution systems.

CE 602 Wastewater Treatment
Advanced design principles and practices in sewage treatment processes; study of unit processes and operations; secondary sewage treatment plant design; sludge handling and disposal; sewage collection systems; introduction to advanced treatment methods.

CE 605 Solid Waste Management
Characteristics, volumes, collection and disposal of solid waste and refuse. Design of processing, recycling, and recovery equipment, landfill design and operation, resource recovery, incineration.

CE 606 Environmental Law and Legislation
Review and techniques of enforcement of state and federal pollution control laws and regulations; effects on waste treatment criteria and design and evaluation of municipal ordinances; preparation of environmental assessments and impact statements.

CE 612 Advanced Wastewater Treatment
Prerequisite: CH 601, which may be taken concurrently. Theories and principles of advanced sewage treatment including nutrient removal, demineralization, distillation, ozonation, carbon filtration, ion exchange, nitrification; design of facilities; upgrading secondary plants.

CE 613 Industrial Wastewater Control
Prerequisite: CH 601. Characteristics of industrial wastes, volumes, sources, types; methods of volume reduction, waste segregation, recovery, recycle, and waste treatment.

CE 616 Ground Water Waste Disposal
Study of effects of disposal of wastewaters in ground waters; travel of pollutants through soil; removal of nutrients and pollutants by soil interactions; leachate identification and control from refuse disposal areas.

CE 670 Special Topics-Civil Engineering
A study of related topics of particular interest to students and instructor. Course may be taken more than once.

CE 690 Research Project
Prerequisite: 18 graduate hours or permission of chairman of the Department of Civil Engineering and advisor. Independent study under the guidance of an advisor into an area of mutual interest, each study terminating in a technical report of academic merit. Research may be in such environmental areas as water resources, stream pollution, solid waste management or air pollution.

CE 695 Independent Study in Environmental Engineering I
Prerequisite: permission of program coordinator. Independent study under the guidance of an advisor into an area designated by the program coordinator.

CE 696 Independent Study II
A continuation of Independent Study I.

CE 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

CE 699 Thesis II
A continuation of Thesis I.

Chemistry

CH 601 Environmental Chemistry
Advanced study of the chemical reactions necessary to understand the impact that man's activities have on the environment. Areas considered include water and air pollution, power generation, and the release and use of industrial organic chemicals.

CH 611 Special Topics in Advanced Organic Chemistry
Advanced course dealing with topics such as stereochemistry, photochemistry, natural products and mechanisms of organic reactions.

CH 621 Chemical Forensic Analysis with Laboratory
A course intended to present advanced techniques and new developments in the identification of various materials such as pigments, dyestuffs, food additives, pharmaceutical preparations, polymers, synthetic fibers, and inorganic material products. Laboratory fee required. 4 credit hours.

CH 625 Chemistry of Fires and Explosions
An examination of the basic organic chemistry and combustion and explosive properties of flammable materials. The chemical principles underlying fires and explosions. Chemical properties of various synthetic materials, and the products of their combustion. Fire retardent materials and chemicals used in fire extinguishment.

CH 631 Advances in Analytical Chemistry
A course intended to provide background for the recent advances made in instrumentation and current analytical techniques.

CH 670 Selected Topics
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

CH 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

CH 696 Independent Study II
A continuation of Independent Study I.

CH 698 Thesis I
Prerequisite: Completion of 15 credits of graduate work. Periodic meetings and discussion of the individual student's progress in the preparation of a thesis.

CH 699 Thesis II
A continuation of Thesis I.

Criminal Justice

CJ 601 Seminar in Interpersonal Relations
Interpersonal communication in teaching, supervision and in various work relationships. The criminal justice worker as a resource person and facilitator of others is stressed. Humanistic psychology and interpersonal psychology provide the theoretical base.

CJ 604 Seminar in Theory and Philosophy of Law
The theory and philosophy of law and the relationship between law and society. Emphasis on the nature of the judicial process, the issues of law and personal morality, nonvictim crimes, and the relationship of enforcement agencies to the rules of law.

CJ 605 Social Deviance
A survey of theories relating to the scope and nature of the crime problem. Consideration of the problems of deviancy, including social norms deviancy, mental disturbances, juvenile crime, and the various possible and actual responses to deviancy. Various approaches to the problem of rehabilitation.

CJ 607 Seminar in Criminal Justice Institutions
The machinery of justice in theory and practice. The rule of law and its expectations in the actual administration of justice. Emphasis of the progressive changes in the development of children's and adolescents' courts, probation and classification clinics. Crime prevention and reforms of the criminal law. Special problems of justice and the poor. Administrative denials of justice, the insane offender, the white-collar criminal and social reconstruction through law.

CJ 608 Law and Evidence
Comprehensive analysis of the rules of evidence. Topics include judicial notice, presumptions, the nature of real and circumstantial evidence, hearsay evidence, confessions and admissions and witnesses. Emphasis on evidence in criminal cases.

CJ 609 Criminological Theory
An analytical review of the multidisciplinary theories of criminal behavior. The impact of various theoretical constructs and concepts on practice will be critically evaluated.

COURSES

CJ 610 Administration of Justice
A study of all the steps of the criminal justice system from the time the accused is arrested until sentencing to a correctional facility with an objective to review all the problems which arise during this process and to consider some possible solutions which will benefit the individual being processed without subverting the purposes of the process.

CJ 612 Criminal Justice Management
The development of the theory and practice of criminal justice management in the United States. Significant developments and ideas of those who have made major contributions to American criminal justice management.

CJ 614 Survey of Forensic Science
An introductory survey of forensic sciences and criminalistics, crime scene procedures and documentation, and methods of laboratory analysis for students specializing in security and investigation.

CJ 616 Advanced Crime Scene Investigation
An in-depth study of crime scene procedures, including recognition, protection, documentation and collection of physical evidence, scene documentation, scene search procedures, and reconstructions from evidence and scene patterns.

CJ 618 Probation and Parole: Theory and Practice
The philosophy, theory and methods employed in probation, parole and institutional treatment of the offender. The role of authority, casework, classification, treatment policy and administrative organization in determining the consequences of correctional practice.

CJ 619 Seminar in Comparative Criminal Justice Systems
Prerequisite: CJ 610. A cross-cultural study of police, court and correctional systems and methods.

CJ 620 Advanced Criminalistics I
The comparison and individualization of physical evidence by biological and chemical properties is presented in lectures and carried out in the laboratory. The theories and practice of microscopic, biological, immunological and chemical analysis are applied to the examination of blood, saliva, semenal fluid, hair, tissues, botanical evidence and other material of forensic interest.

CJ 621 Advanced Criminalistics I
1 credit hour. Laboratory fee required.

CJ 622 Learning Theory: Applications in Criminal Justice
Applications of the psychology of learning to police and correction settings.

CJ 624 Group Process in Criminal Justice
Small group interaction; both theoretical and experimental facets of group process are presented. Group counseling and encounter groups.

CJ 628 Introduction to Systems Theory
Concepts of systems theory and systems analysis in contemporary socio-technical environments.

CJ 630 Delinquency and Juvenile Crime
Prerequisite: CJ 610. A general introduction to the field of delinquency and crime, including all aspects of the social, legal and personal matrix out of which these forms of behavior emerge. Special emphasis will be given to the process and implications of delinquency labeling.

CJ 632 Advanced Investigation I
An in-depth study of modern principles and techniques of criminal and civil investigations. Management of investigations, use of witnesses, interviewing, polygraph, backgrounds establishment of MO, missing persons, surveillance, and investigation of questioned deaths and death scenes.

CJ 633 Advanced Investigation II
An in-depth study of the principles and techniques of criminal and civil investigations. Investigation of fraud, embezzlement, white collar crime, property crimes, sexual assaults and other crimes against persons, extortion, kidnapping, drug trade, and traffic accidents.

CJ 635 Statistics in the Public Sector
Statistical techniques applied to the public sector. Descriptive statistics: measures of central tendency and variability. Introduction to statistical inference including sampling distributions and tests of significance. Some techniques of nonparametric statistics, multiple regression and elementary decision theory. Analysis of variance and covariance.

CJ 637 Contemporary Issues in Criminal Justice
Topics selected by students relating to current issues and concerns in the field of criminal justice. Each student will be required to write a paper and deliver an oral presentation on a selected topic.

CJ 640 Advanced Criminalistics II
Advanced microscopic, chemical and instrumental methods will be introduced with extensive "hands-on" experience provided by a laboratory section. Principles and methods of analysis of microscopic and macroscopic evidence such as glass, soil, papers, inks, dyes, paints, varnishes, explosives, fibers, drugs and other potential physical traces will be discussed in class.

CJ 641 Advanced Criminalistics II
1 credit hour. Laboratory fee required.

CJ 644 Police in Urban Society
An introduction to some of the current thinking and problems of policing in urban society. The course will examine such issues as the historical growth of the police, the role and mission of the police, measurement of the police tasks, police corruption and other topics of interest to the seminar members. The course will stress the development of analytic thinking in defining and dealing with police problems.

CJ 649 Fire Scene Investigation and Arson Analysis
The techniques of crime scene documentation and investigation as they relate to fire and explosion scenes. Evidence recognition and collection. Laboratory analysis of fire scene, arson accelerant and explosion scene residues. Scientific proof of arson. Laboratory fee required. 4 credit hours

CJ 651 Problems in the Administration of Justice
A study of the interaction between the law enforcement official and the accused beginning with detention and/or arrest, during which time the official is seeking to secure incriminating evidence effectively while still protecting the Fourth, Fifth and Sixth Amendment constitutional rights of the "presumed innocent" accused.

CJ 653 Physical Analysis in Forensic Science
The classic firearms examination, classification and comparison of bullets and cartridges, toolmarks comparison and striation analysis, serial number restoration, document examination, voice print identification, fingerprints and polygraphy examination.

CJ 654 Physical Analysis in Forensic Science
1 credit hour. Laboratory fee required.

CJ 655 Bureaucratic Organization of Criminal Justice
Prerequisite: CJ 610. Through an application of modern organizational theory, a critical analysis of criminal justice agencies will be made. Emphasis will be placed on viewing criminal justice in theoretical perspective. Linkages between theory and operationalization of principles will be made.

CJ 658 Psychiatry and the Law
An examination of issues that relate to the interaction between the law and mental illness and the general role of forensic psychiatry.

CJ 660 Forensic Microscopy
Basic techniques of optical microscopy and the development of operational skills for the use of the microscope as a tool of evidence detection and evaluation. Microscopical measurements and analytical methods will be covered. Laboratory fee required. 4 credit hours.

CJ 661 Medicolegal Investigation and Identification
An introduction to procedures and techniques for medicolegal investigation of questioned death, and identification of deceased persons, including autopsy technique, odontological procedures and anthropological approaches.

CJ 662 Forensic Toxicology
An in-depth analysis of forensic toxi procedures and methods, determination of metallic, volatile and soluble poisons, analysis for narcotic drugs, other drugs of abuse, and dosage form or from drugs that are commonly abused. Laboratory fee required. 4 credit hours.

CJ 663 Advanced Forensic Serology I
A comprehensive study of the theory and practice of biochemical and immunological procedures for blood and body fluid identification; ABO grouping procedures for whole blood and bloodstains; typing of Rh, MNSs and other red cell antigens in blood and blood stains; antiserum selection and evaluation. Laboratory fee required. 4 credit hours.

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CJ 664 Advanced Forensic Serology II
A comprehensive study of the theory and practice of isoenzyme, serum protein and immunoglobulin genetic markers in human blood and body fluids. Electrophoretic and isoelectric focusing techniques. Interpretation of genetic marker results in blood individualization. Laboratory fee required. 4 credit hours.

CJ 665 Legal Aspects of Fire and Arson Investigation
The legal principles underlying and governing the conduct of criminal investigations, with particular emphasis on arson. The criminal law relating to arson, establishment of the crime, investigation and prosecution procedures in arson cases.

CJ 667 Fire and Building Codes, Standards and Practices
The study of building and fire codes and regulations, as they relate to the prevention and incidence of structural fires. Contemporary building and fire codes and practices, and their enforcement. Model building codes. Fire prevention and control through building design.

CJ 668 Fire and Casualty Insurance Practices
A study of financial risk and decision making from the investigative point of view. Insurance rate making and relation to risk and other factors. Insurance adjustment and economic factors that must be considered in fire and accident investigations.

CJ 669 Dynamics, Evaluation and Prevention of Structural Fires
A detailed analysis of the evolution of modern structures, and the mechanical systems necessary to provide safety and comfort. The effect of the nature of structures and their mechanical systems on fire behavior. Structural bases and mechanical systems for fire protection and fire prevention.

CJ 670 Selected Issues
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

CJ 672 Innovative Treatment Programs in Corrections
The theory and practice of a wide range of innovative correctional treatment modalities will be analyzed. Students will be given the opportunity to participate in various experiential exercises and to develop and propose new treatment approaches.

CJ 673 Biomedical Methods in Forensic Science
Methods and application of modern toxicology, biochemistry, pathology, dentistry and medicine in forensic science.

CJ 674 Biomedical Methods in Forensic Science
1 credit hour. Laboratory fee required.

CJ 675 Private Security Law
A review and examination of currently applicable Federal and State administrative, civil, criminal and constitutional laws as they relate to the private security industry. The framework of the course will include sources of authority and common law.

CJ 676 Security Management Seminar
Current problems, concerns, issues, and legislation affecting the private security industry as they relate to and are of interest to the students and instructor.

CJ 677 Private Security in Modern Society
An introduction to current thinking and problems relating to the private security industry. The course will examine such issues as historical growth, role, mission, and future of the industry. Other topics will include professionalization and ethics in the private security field.

CJ 690 Research Project I
Individual guidance on a research endeavor. 1-3 credits.

CJ 691 Research Project II
Prerequisite: CJ 690. 1-3 credits.

CJ 693 Criminal Justice Internship I
The student's formal educational development will be complemented by field placement experience in various criminal justice settings or agencies. Field experience will be supervised by designated agency and departmental personnel.

CJ 694 Criminal Justice Internship II
Prerequisite: CJ 693.

CJ 695 Independent Study
Student will engage in a directed independent learning experience, the topic and format to be agreed upon by the student and supervising faculty. 1-3 credits.

CJ 697 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress toward the completion of the thesis.

CJ 698 Thesis II
Prerequisite: CJ 697. A continuation of Thesis I.

CJ 699 Thesis III
A continuation of Thesis II.

Communication

CO 601 Basics of Business Media Production Techniques
This course will provide a survey of the implementation of various media in the production of instructional and promotional materials specifically for the small and medium business and corporate media departments. The course will emphasize both theoretical and practical problems of audio and visual systems available to the business situation, paying particular attention to the vocabulary and skills which make it possible to transfer an idea from the board room to an effective media presentation. Laboratory fee required.

CO 605 Planning Audio Visual Systems for Business
Prerequisite: CO 601. This course will use the technology learned in the basic course, and apply this to the planning of an audiovisual center within a business or corporation setting. Students will be involved in projects of design and budget.

CO 609 Scripting the Media Presentation
This course is designed to show the student how to select the medium appropriate to the message, write a treatment, develop a story board, script the message and use proper format.

CO 613 Media Presentations for Business
Prerequisite: CO 601, CO 609. This course is designed to provide the student with an opportunity to produce a major instructional or promotional media project for a specific business or corporation. The student will be responsible for finding a sponsor for this project which will be produced in one or any of the audio/visual formats discussed and practiced in prerequisite courses. Laboratory fee required.

CO 621 The Communication Process
Major emphasis on the role of communication in a democracy and the effects of communication content. Brief treatment of content analysis techniques, person-to-person communication and barriers to the flow of communication.

CO 670 Selected Topics
Prerequisite: permission of the advisor. An in-depth examination of a topic in the field of communication which reflects the special research of a faculty member, or the special interest of a group of students. May be taken more than once.

CO 693 Internship
A program of field experience set up by the student and approved by the program advisor under the tutelage of a professional in the field.

CO 695 Independent Study I
A planned program of individual study or research in communication under the supervision of a member of the faculty.

CO 696 Independent Study II
A continuation of Independent Study I.

CO 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings with the advisor of the individual student's progress in the preparation of a thesis.

CO 699 Thesis II
A continuation of Thesis I.

Economics

EC 600 Basic Economics
A basic theoretical foundation for students who have a deficiency in economics. The course is a review and refresher of basic economic principles. No credit.

EC 603 Microeconomic Analysis
Prerequisite: undergraduate Principles of Economics or EC 600, Basic Economics. Topics in resource allocation and price determination. Theories of choice of consumers, firms, resource owners under monopoly, monopsony, competition and alternative market forms.

EC 604 Macroeconomic Analysis
Prerequisite: undergraduate Principles of Economics or EC 600, Basic Economics. An examination of the roles of consumption, investment, government finance and money influencing national income and output, employment, the price level and rate of growth. Policies for economic stability and growth.

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EC 608 Economics for Public Administrators
An examination of the roles of consumption, investment, government expenditure and money influencing national income, output, employment and price level, and growth rate. Special emphasis upon the roles of fiscal and monetary policy and the economics of contemporary social problems.

EC 625 Industrial Relations
A survey of the problems, strategies and policies of management and unions in conflict situations and in harmonizing labor-management relations. Labor legislation, collective bargaining and alternative strategies, productivity and other problem areas in labor-management relations are examined.

EC 627 Economics of Labor Relations
A survey of labor economics and the economics of labor relations using both the tools of economic analysis and institutional analysis. The emphasis is on the application of economics to labor problems and labor-management relations.

EC 629 Public Policies Toward Business
A survey of the economic aspects of governmental and business relations. Emphasizes the concept of public control over certain types of business and certain forms of business activity. Combination movements, pricing procedures, anti-trust laws and agencies enforcing them, regulation of transportation and public utilities, rate-making for transport, pricing public utility services, consumer protection and social responsibility.

EC 630 Structure of American Industry
An examination of several major U.S. industries such as automobiles, steel, petroleum, defense and agriculture. Some contemporary problems are analyzed. A study of the powerful economic forces acting on these industries and how firms react to these forces.

EC 633 Managerial Economics
Prerequisite: EC 603. A study of the application of the major tools of economic analysis to the problems encountered by management in the organization of the firm. Topics include the theory and measurement of consumer demand, measurement and control of costs, the effects of public policy upon managerial decisions and pricing techniques and the allocation of capital within the firm.

EC 635 Comparative Economic Systems
Capitalism, Socialism, Communism and other economic systems will be examined with respect to their theoretical foundations and practical applications, including the interrelationships among economic, political and social institutions.

EC 641 International Economics
A study of the basic theory and major institutions of international economic relations. Examines critically the techniques and background of protectionism and free trade, and the analysis of customs, unions and price and exchange rate changes. The theory of comparative advantage; the gains from trade and the terms of trade. The balance of payments and national income. Capital movements and economic growth. The evolution of the world economy and international economic institutions. Effects of growth on trade, and trade on growth. Monopolistic practices in international trade. The international monetary system and international monetary reforms.

EC 645 Seminar in Macroeconomic Policy
Prerequisite: EC 604. The impact of fiscal and monetary policy upon employment, output and prices. An analysis of past and current economic controls and their impact upon the economy.

EC 650 Economics of Petroleum
A survey of the economic development and growth of the American oil industry as part of the international oil industry. Economic aspects of the energy crisis, oil reserves, conservation, OPEC, U.S. energy conservation program, oil pricing, and oil substitutes. Policies of oil exporting nations, oil companies and oil consumer nations throughout the world will be given special attention.

EC 653 Econometrics
Prerequisites: EC 603-604, QA 604-605, or permission of the instructor. A presentation of the important statistical concepts used in econometrics. Topics covered are regression theory, multiple regression, regression extensions, correlation, serial correlation, correlated regressor and error, the identification problem, selected estimating techniques.

EC 665 Urban and Regional Economic Development
Structure of the urban and regional economy; goals, processes, problems and policy in urban and regional economic development.

EC 668 Economics of Crime
Topics include the economic costs of crime; the costs of preventing crime; the impact of white collar crime on American society

EC 670 Selected Topics
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

EC 687 Collective Bargaining
Prerequisite: EC 625. Emphasis on the negotiating process. The labor contract as it involves wages, worker security, management authority and handling of grievances arising during the life of the contract.

EC 690 Research Project
Prerequisite: 15 graduate hours or permission of the instructor. Independent study under the supervision of an advisor.

EC 692 Readings in Economics

EC 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

EC 696 Independent Study II
A continuation of Independent Study I.

EC 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

EC 699 Thesis II
A continuation of Thesis I.

Electrical Engineering

EE 603 Discrete and Continuous Systems I
Prerequisite: M 624. Discrete and continuous linear system models. State variable representation and transfer function representation. Feedback control systems, stability, performance and design criteria. State variable and compensation synthesis. Nonlinear systems, describing functions and phase plane techniques. Stability methods of Liapunov.

EE 604 Discrete and Continuous Systems II
Prerequisite: EE 603.

EE 605 Modern Control Systems
Prerequisite: EE 604. Advanced topics in control systems. May include optimal control, dynamic programming, variational approaches, adaptive control, sampled data systems, signal modulated systems, random signal methods.

EE 608 Computer-Aided Design
Prerequisite: M 624. Numerical algorithms for engineering systems analysis. The design problem and performance measures. Optimization of networks and filters. Parameter sensitivities. Device modeling and equivalent circuits.

EE 615 Introduction to Computer Logic
Prerequisite: IE 603 (or equivalent). Introduction to logic elements and to their application in digital networks for processing numerical data. The course deals with analysis and design techniques of combinational and sequential networks and includes a discussion of logic variables, switching functions, optimal realizations, multivariable systems. Design examples will include logic circuits for addition, multiplication, counting, parity generation and detection.

EE 630 Electronic Instrumentation I
Prerequisite: permission of instructor. Design of modern electronic instrumentation. Circuit and system examples, evaluation and design techniques. Emphasis on practical applications including design theory and the circuit techniques used in linear integrated devices. Variety of electronic instrumentation including computer interfaces, signal conditioners, waveform generators and shapers, filters, V/F, A/D, D/A converters and other special purpose circuits.

EE 631 Electronic Instrumentation II
Prerequisite: EE 630.

EE 634 Digital Signal Processing I
Prerequisite: EE 603. A study of the theories of digital signal processing and their applications. Topics include discrete time signals, Z transform, the discrete Fourier Transform, the FFT, digital filter design techniques, homomorphic signal processing and various applications of digital signal processing.

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EE 635 Digital Signal Processing II
Prerequisite: EE 634.

EE 640 Computer Engineering I
A study of computer structure and organization. Peripheral devices, addressing memory, assembler instruction set, programmed requests, real-time software modules, assembler language programming. Laboratory fee required.

EE 641 Computer Engineering II
Prerequisite: EE 640. Applications of computers to physical systems for monitor control functions. Interfacing using hardware modules. Case studies may include synchronous motor transient studies, shock wave phenomena, dynamic chemical reaction monitoring and control, signal processing, sampled data control systems. Students must complete a project. Laboratory fee required.

EE 645 Power Systems Engineering I
Prerequisite: permission of instructor. Concepts and methods of analysis and design of modern power systems will be treated. This will include the network representation of power systems, matrix methods, symmetrical components and the use of the computer in the solution of problems such as short circuit fault calculations, load flow study, economic load dispatching and stability. Other topics may include protection, relaying or transmission system design.

EE 646 Power Systems Engineering II
Prerequisite: EE 645.

EE 650 Random Signal Analysis
A study of the theory of random signals and processes. Topics include a review of probability, random signals, auto and cross correlation, power density, spectral analysis of random signals.

EE 658 Microprocessors — Theory & Applications
Prerequisite: EE 640. A study of the techniques and methods of designing digital systems using a microprocessor as the basic unit. Microcomputer assembly language, operating systems, input/output devices, programmable read-only memories and interfacing.

EE 670 Special Topics — Electrical Engineering
Prerequisite: permission of instructor. A study of selected topics of particular interest to students and instructor. Course may be taken more than once.

EE 695 Independent Study I
Prerequisite: permission of instructor. A planned program of individual study or research under the supervision of a faculty member.

EE 696 Independent Study II
A continuation of Independent Study I.

EE 698 Thesis I
Prerequisite: completion of 15 credits of graduate work. Individual student project under supervision of faculty advisor. Written and oral report required. Student must enroll in 6 credits of thesis.

EE 699 Thesis II
A continuation of Thesis I.

Executive M.B.A.

The program consists of twenty (20) courses, each four sessions in length. The courses are grouped into logically interrelated clusters, i.e., The Quantitative Group, The Industrial Relations Group, The Finance Group, The Marketing Group, and the Management Group.

EXID 903 The Communication Process
Communication needs in corporate staff development, cohesion, cooperation, and consensus through effective communication management. The role of communication in thought processes and problem solving.

Quantitative Group

EXID 936 Statistics and Forecasting
Examination of the utility and method of traditional statistical techniques as aids in the decision making process. Topics include descriptive and inferential statistics, regression, time series and an introduction to forecasting.

EXID 915 Quantitative Decision Making
Examination of statistical methods and their relevance to decision making under uncertainty. Includes an introduction to probability, elements of statistical decision theory and Bayesian analysis.

EXID 918 Managerial Economics
Application of economic analysis to business forecasting planning and policy formation. Topics include cost-benefit analysis, cost estimation and break-even analysis.

EXID 939 Operations Research and Management
Analysis of management science techniques from the executive perspective. Focus on understanding the value of inventory and systems models, forecasting methods and simulation techniques.

EXID 960 Computers and Management
Analysis of the uses and abuses of management information systems as well as hardware and software acquisition.

Industrial Relations Group

EXID 909 Business and Government Relations
Recent developments and future directions of the business and government interface. Includes contracts, affirmative action, labor negotiation machinery, regulatory agencies and anti-trust legislation.

EXID 948 Labor and Management Relations
Contemporary issues in labor-management relations are analyzed including collective bargaining, grievance-arbitration procedures and the expanding impact of organized labor on manpower management.

EXID 945 Human Resources Management
The effective management of the aggregate human resource in the modern organization. Analysis of personnel policies and procedures, manpower planning and employee training and policies.

Finance Group

EXID 924 Financial Management I
Analysis of financial decision models for investment, financing and dividend decisions of the profit-oriented firm. Includes capital budgeting, capital structure and the cost of capital and dividend policy.

EXID 927 Financial Management II
Analysis of financial decision models for the management of working capital. The management of current assets and the related financing mixture.

EXID 912 Financial Accounting
Analysis of the objectives, standards and methods embodied in the financial accounting information system. Emphasis is upon financial reporting standards as they relate to financial position, results of operations and changes in financial position.

EXID 942 Managerial Accounting
Examination of accounting tools for planning, controlling and evaluating the economic performance of the firm. Topics include budgeting, flexible budgets, standard costs, contribution reporting, responsibility accounting and decision analysis.

Marketing Group

EXID 933 International Business
Examination of the theory of international trade, exporting and importing, cultural dynamics and comparative management and marketing systems.

EXID 930 Marketing Management
The marketing concept and corporate decision making with respect to product planning, advertising and promotion, sales management, distribution channels and price policies.

EXID 951 Marketing Management Seminar
Current issues and topics in marketing management. Includes recent regulatory rulings, consumerism and related areas.

Management Group

EXID 906 The Management Process
The role of executives and managers in administrative and operational processes. Topics include organizational goals and structure, planning and performance controls and resource management.

EXID 954 Organizational Development
Various methods for effective organizational development in contemporary environments. Analysis of means to improve existing organizations in consideration of past history and changing value structures.

EXID 957 Corporate Policy and Strategy
Analytical frameworks are developed through the study of major corporate policies and strategies. Focus is upon the total organization and comprehensive operation procedures of the complex corporation.

COURSES

EXID 921 Executive Development Seminar

Mechanisms for identifying and discussing the developmental needs of subordinate managers are discussed. Using subordinate involvement in decision-making as a vehicle, several management development techniques are examined including contrived and actual cases, role playing, individual feedback and group exercises. The module is concluded by a computerized business game in which participants may utilize the knowledge obtained in earlier modules to manage firms in competition.

Finance

FI 615 Finance

Prerequisites: EC 603-604, QA 604, QA 605, A 621. The investment, financing and valuation of business firms. Topics include: discounted cash flow, return on investment, investment decisions under uncertainty, long- and short-term sources of funds, optimal financial structure, cost of capital, dividend policy. (Expansion, merger, working capital management and failure and reorganization may also be covered.)

FI 617 Financial Institutions and Capital Markets

Prerequisites: FI 651, FI 615. This course stresses the financial management of financial institutions and capital market. Analyzes the institutional and theoretical structure of monetary change and the manner in which financial institutions and markets transmit and influence the impact of monetary policy. Special attention to the role of non-monetary financial intermediaries, the structure and regulation of capital markets, and the functions of market yields as the price mechanism that allocates saving to various categories of economic investments.

FI 619 Monetary and Central Banking Policy

Prerequisite: FI 615. The impact of monetary change upon employment, output and prices; the formulation and execution of Federal Reserve policy designed to regulate money, credit and interest rates.

FI 620 Working Capital Management and Planning

Prerequisites: FI 615, FI 617, FI 651 or permission of instructor. The examination and understanding of working capital management, leasing, mergers, and acquisitions and overview of multinational finance.

FI 645 Corporate Financial Theory

Prerequisites: FI 617, FI 651. An analysis of the theoretical structure supporting optimum financial decision making by the business firm. Emphasis is placed upon the determination of the combination of investment, financing and dividend decisions that maximizes the valuation of the firm within a security market context.

FI 649 Security Analysis

Prerequisite: FI 651. An analysis of the determinants of valuation for fixed income securities, common stocks, convertible securities and common stock warrants. Emphasis is placed upon the information and techniques relevant to security valuation and selection and the structure and workings of the securities markets.

FI 651 Portfolio Management and Capital Market Analysis

Prerequisites: FI 615, QA 605 or permission of instructor. Considers the theoretical structure for the procedures (security analysis, portfolio analysis and portfolio selection) which constitute the process of portfolio management, as well as their limitations in practice. Additional attention is placed upon the logical implications of portfolio analysis for capital market theory.

FI 655 Commodity Market Analysis

Prerequisites: FI 617, FI 651. A conceptual and operational examination of the markets in which commodities are traded, the participants and major exchanges including an analysis of the major commodities traded and the factors influencing their prices. Option valuation theory is also covered.

FI 661 Real Estate: Principles and Practices

Prerequisite: FI 615. Real estate from the investor's point of view. Impact of taxation on real estate investments. Emphasis on commercial land use through the use of case studies and problems.

FI 670 Selected Topics
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

FI 690 Research Project
Prerequisite: 15 graduate hours or permission of the instructor. Independent study under the supervision of an advisor.

FI 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

FI 696 Independent Study II
A continuation of Independent Study I.

FI 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

FI 699 Thesis II
A continuation of Thesis I.

Hotel/Restaurant Management, Dietetics, and Tourism Administration

HM 610 Content Seminar in Hotel/Restaurant Management and Dietetics
Detailed analysis of recent developments in food service, lodging and dietary administration. Attention will be given to quality assurance and determination of job priorities.

HM 625 Supervisory and Leadership Development in Hotel and Restaurant Operations
An incident approach is used to provide a cross section of supervisory situations in hotel and restaurant management. Emphasis is given to particular situations involving leadership developments, ethical behavior and formal and informal organizations of social behavior.

HM 630 Personnel and Labor Relations in Hotel and Restaurant Operations
Topics include organizational behavior, personnel selection, placement, supervision, job evaluation, wage and salary administration, motivation morale and union-management relations. Case studies and role playing are integral parts of the course.

HM 635 Applied Dietetics for Health Care Professionals
A critical appraisal of persons with medical and physical problems. The interpretation of dietary and biochemical information gathered on those persons, followed by the nutritional intervention needed. Recommendations will be based on metabolic requirements, monitoring laboratory values, prescribed medications, the nutritional status of the person and the severity of the disease.

HM 640 Haute Cuisine for Hospitality Executives
An advanced course which covers the study and preparation of classical food items and service of the major world cuisines. Emphasis is placed on the geographical, socioeconomical and religious influences which determine cultural patterns of cuisine. Laboratory fee required.

HM 655 Development of Hotel/Restaurant/Institutional Operations
Examines the processes for developing profitable hotel, restaurant and institutional services. Some of the characteristics, opportunities, risks and decisions involved in starting hospitality, dietary and institutional food services are studied. Emphasis is on alternative financing and development of dietary departments by a clinical administrator.

HM 660 Comparative Tourism
A detailed study of tourism development within mainstream, destination countries. An in-depth evaluation of the selected foreign countries in relationship to tourism and the political, geographical, agricultural, religious, climatical, and socioeconomic status.

HM 670 Special Topics in Hotel/Restaurant Management and Dietetics
An in-depth examination of topics in the fields of hotel, restaurant and dietetics which reflects the special interest of a group of students. Focus will be on the managerial skills needed for organizational decision making, aggregation of resources, political power within the organization and the allocation of resources and work flow. The study of the dietitian as manager in a clinical department of a health care facility will be examined.

COURSES

HM 690 Research in Hotel/Restaurant Management and Dietetics
Emphasis will focus toward the individual student and individual interests that may be applicable to current research in hospitality, medical and nutritional literature. Trends toward modification of standard prescribed diet therapy can be explored. Research must be conducted under the supervision of a faculty member.

HM 695 Independent Study I
A planned program of individual study under the supervision of a faculty member.

HM 696 Independent Study II
A continuation of Independent Study I.

HM 698 Thesis I
Prerequisite: 15 graduate hours, permission of an advisor. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

HM 699 Thesis II
Prerequisite: HM 698. A continuation of HM 698, Thesis I.

Humanities

HU 601-602 Themes in Western Thought and Culture: Greece, Rome
Readings in primary sources of some of the classics in Western thought from Homer to the Renaissance. The place of these selected works in the development of Western ideas.

HU 606 Humanism and Its Methodology
A classic idea, work of art, musical composition, work of literature, historical event, and the variety of the critical appraisals of it.

HU 611 Historical Views and Views of History
A survey of modern Western Historiography with particular attention to the methodology of recent and contemporary historians.

HU 616 Art and Thought of the Renaissance
A study of the achievements of some of the major figures of the Renaissance in art, music, philosophy, natural science, literature, drama.

HU 621 The Age of the Enlightenment
Philosophical background of the Age of Reason and its effects upon the art, music, and literature of the period.

HU 626 The Age of Darwin
Scientific thought of the period and its effect upon religious and philosophical ideas, upon art and literature, and upon the development of sociological thought.

HU 631 Culture and Ethics in the Modern Age
Popular attitudes and rational concepts that determine the structure of contemporary America.

HU 636 Philosophical Thought
An examination of the changes in meaning and use of such enduring themes as certainty, existence, God, justice, knowledge, law, right, good.

HU 638 Structuralism and Structural Linguistics
An introduction to the basic principles of structuralism, with special emphasis given to elements of language and linguistic theory.

HU 641 Technology and Human Values
The influence of applied science and technology on our conceptions of ourselves, our society, and our environment.

HU 646 The Social Sciences in Our Time
How the social sciences are related to the humanities, estimates of the human condition in the light of developments in sociology, history, political science, psychology and economics.

HU 651-659 Topics in Humanities

HU 661-669 Topics in History

HU 671-679 Topics in Philosophy

HU 681-689 Topics in the Natural, Physical and Social Sciences

HU 691-695 Independent Study
A planned program of individual study or research under the supervision of a member of the faculty.

HU 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis or portfolio.

HU 699 Thesis II
A continuation of Thesis I.

International Business

IB 643 International Business
Prerequisites: EC 603, EC 604. An introduction to the political, economic, technological and cultural setting of international business. Topics include the problems, policies and operational procedures of the multinational corporation, including the adjustment to foreign cultures and governments. The review of the development, organization and structure of the international firm will also be analyzed.

IB 644 International Trade and Finance

Prerequisites: IB 643, MK 609. Methods and procedures of financing imports and exports and documentation for import and export marketing. An examination of commercial policy, international flows of funds, balance of payments adjustments and exchange rates will be evaluated. The techniques of international financing within a context of foreign markets and currencies.

IB 645 Comparative International Business Environments

Prerequisites: IB 643, MK 609. A comparative approach to the study of non-economic aspects of foreign markets of several representative areas in the world. The focus is on the cultural, political, legal characteristics of foreign regions and their impact on the multinational firm. Major attention is given to the relationship of less developed countries and multinational corpo rations.

IB 651 International Marketing

Prerequisites: IB 643, MK 609. The application of marketing, principles, techniques in a global environment. A managerial approach to international marketing as it pertains to product policies, market channels, pricing, advertising in a foreign market. Emphasis is placed upon marketing in different cultural settings.

IB 652 Multinational Business Management

Prerequisites: IB 643 and MK 609. An examination of global strategy, production, planning, ownership control, organization and human resource management of the multinational corporation. The firm's international transactions, investments and risk factors will be analyzed.

IB 670 Selected Issues

A study of selected issues of particular interest to the students and instructor. May be taken more than once.

IB 690 Research Project

Prerequisite: 15 graduate hours and permission of the instructor. Independent study under the supervision of an advisor.

IB 695 Independent Study I

A planned progam of individual study under the supervision of a member of the faculty.

IB 696 Independent Study II

A continuation of Independent Study I.

IB 698 Thesis I

Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

IB 699 Thesis II

A continuation of Thesis I.

Industrial Engineering

IE 601 Introduction to Operations Research/Management Science

Prerequisites: M 610 and IE 607 or QA 604 or equivalent. Introduction to the techniques and philosophies of management science and operations research. Topics include linear programming, inventory analysis, queuing theory, dynamic programming, decision analysis and other management techniques.

IE 602 Computing Fundamentals

An introduction to computing, including consideration of basic concepts and technology, history of automatic computation, algorithms, and flowcharts, number systems, system organization, software systems, survey of programming languages and of special computer applications.

IE 603C Introduction to Digital Computers: COBOL

Recommended prerequisite: IE 602 or equivalent. An introduction to the basic elements of computer science including computer hardware, software, information and data processing. Programming concepts are introduced using COBOL, a common business-oriented language. A student who has taken IE 603F will not be given credit for IE 603C. Laboratory fee required.

IE 603F Introduction to Digital Computers: FORTRAN

Recommended prerequisite: IE 602 or equivalent. An introduction to the basic elements of computer science including computer hardware, software, information and data processing. Programming concepts are introduced using FORTRAN, a common language that is well-suited for scientific and technical work. A student who has taken IE 603C will not be given credit for IE 603F. Laboratory fee required.

IE 604 Management Systems

Techniques of industrial and governmental systems management including general systems and organizational theory.

COURSES

IE 605 Advanced Business Programming
Prerequisites: IE 603C or proficiency in language similar to COBOL. Advanced programming in COBOL or other business-oriented language within an applied business systems context. Laboratory fee required.

IE 606 Advanced Technical Programming
Prerequisites: IE 603F or proficiency in a language similar to FORTRAN. Advanced programming in FORTRAN or other technically-oriented language with emphasis on scientific and technical applications. Laboratory fee required.

IE 607 Probability Theory
Prerequisite: M 610 or equivalent. Probability of events. Random variables and expectations; discrete and continuous distributions; important standard distributions and applications; moment generating functions; central limit theorem.

IE 608 Assembler Language
Prerequisite: IE 603 or equivalent. Description of the general functional characteristics of a computer's main storage and peripheral units. Interrupt philosophy and interrupt service routines. Discussion of the general philosophy of assembler instructions, code conversion of I/O to and from main memory and familiarization with appropriate reference manuals. Micro instructions will be introduced to allow for writing and running of assembler programs. Macro instructions will be developed to demonstrate techniques for reduced programming time. Laboratory fee required.

IE 610 Computer Systems Selection
Prerequisites: IE 605 or IE 606, IE 614. Techniques for selecting, installing, and operating computer systems and their peripheral equipment. Concepts of decisions with respect to compiler and hardware selection. Development of operating procedures, form design, systems charting and documentation.

IE 611 Budgeting and Control
Prerequisite: A 600. An analytic approach as applied to the principles and policies of operational budgeting and control of expense and capital investments. Includes forecasting techniques, development of totally integrated systems with traditional financial statements and controls from top management to first-line supervision.

IE 612 Managerial Interactions I
An interdisciplinary systems approach to human behavior in organizations with emphasis on the impact of industrial engineering methods on organizational performance. The first course will deal with individual motivation and face-to-face interaction in managerial roles; the second concentrates on organizational development, job enrichment, and modern work attitudes.

IE 613 Managerial Interactions II
Prerequisite: IE 612.

IE 614 Data Information Systems
Prerequisites: IE 603 or equivalent, IE 604. Introduction to automated information systems planning and operations and their impact on management decision making, control functions and communication capabilities. An overview of concepts and procedures with applications in urban environments, large organizations and governmental agencies. Techniques presented include PERT/CPM, Gantt charting, cost-benefit analysis.

IE 615 Transportation and Distribution
Prerequisite: IE 601. Introduction to transportation science with emphasis on physical distribution problems. Survey of operations research models and optimization strategies and their roles in transportation systems management.

IE 621 Linear Programming
Prerequisites: M 610 or equivalent, IE 601 or equivalent. Thorough coverage of the techniques and applications of linear programming, a powerful operations research tool for optimal allocation of limited resources in linear systems.

IE 622 Queuing Theory
Prerequisites: IE 601, IE 607. Elements of queuing theory including finite and infinite cases. Single server and multiple server parallel channels, series queues and special cases are analyzed. Experimental methods, including simulation, are presented in the context of industrial environments.

IE 623 Decision Analysis
Prerequisite: QA 605 or IE 607. Decision theory, game theory, and stochastic decision processes. Benefit-cost analyses under uncertainty.

IE 624 Quality Analysis
Prerequisite: IE 607. Concepts of quality and statistical quality analysis. Sampling techniques and decision processes.

IE 643 Reliability and Maintainability
Prerequisites: IE 602, IE 607 or QA 604. The basic theory and methodology of reliability and maintainability, including application of discrete and continuous distributions and statistical designs. Reliability, estimation, structure models and growth models.

IE 648 Data Structures
Prerequisite: IE 603 or equivalent. An examination of data structures and their associated computing algorithms. Topics will include: arrays, linked lists, trees, stacks, queues, hashing techniques; algorithms such as sorting and searching, insertion and deletion; analysis of computational complexity. Some programming will be required; proficiency in a high-level programming language is required.

IE 651 Human Engineering I
A broad coverage of the physiological, psychological, and sociological aspects of man and the society in which he lives and works. Special topics include human factors, motivation, group dynamics and ekistics.

IE 652 Human Engineering II
Prerequisite: IE 651. Continuation of Human Engineering I.

IE 658 Data-Base Systems
Prerequisite: IE 648. A survey of data-base (DB) systems, their purpose, structure, capabilities, uses. Topics will include: an overview of DB systems, their advantages and shortcomings; technical considerations, internal data storage methods; DB languages, data definition and manipulation; privacy and security in DB's; typical data-bases and their use.

IE 670 Current Topics in Computer and Information Science
Prerequisites: IE 601, IE 603, or permission of the instructor. An examination of new developments or current practices in computer and information science. A topic will be selected for thorough study; possible subject areas include data structures, recent hardware or software advances, specialized applications. Content may vary from trimester to trimester.

IE 671 Current Topics in Operations Research
Prerequisites: IE 601, IE 607, IE 621 or permission of the instructor. An examination of new developments or current practices in operations research. A topic will be selected for thorough study; possible subject areas include non-linear programming, network theory, scheduling techniques, specialized techniques, specialized applications. Content may vary from trimester to trimester.

IE 672 Current Topics in Industrial Engineering
Prerequisite: IE 601 or permission of the instructor. An examination of new developments or current practices in industrial engineering. A topic will be selected for thorough study—possible subject areas include reliability, production engineering, human factors, specialized applications. Content may vary from trimester to trimester.

IE 681 System Simulation
Prerequisites: IE 601 or equivalent, IE 606 or equivalent. A study of the behavior of systems using computer simulation models of their organizational structure and decision criteria. Laboratory fee required.

IE 682 Compiler Design
Prerequisites: IE 605 or IE 606, and IE 608 or permission of the instructor. Design and operation of assemblers and macroprocessors. Introduction to compiler design. Metalanguage. Lexical and syntactic analysis. Interpretive systems. Control of translation, loading and execution. Relocating loaders and overlay generation. Symbolic coding systems.

IE 683 Systems Analysis
Prerequisites: IE 601 or QA 605, IE 614. Techniques and philosophies defining the concept of systems analysis are presented in detail and illustrated with large scale case studies. Diverse systems are analyzed covering the social, urban, industrial and military spheres. Techniques presented include utility theory, decision analysis, and technological forecasting.

IE 684 Multiprogramming Systems
Prerequisites: IE 605 or IE 606, and IE 608 or permission of the instructor. Topics in the areas of operating systems and computer architecture. Multiprogramming and multiprocessor systems. Dynamic storage allocation and virtual memory systems. Time-sharing systems. On-line, real-time systems.

IE 685 Theory of Optimization
Prerequisites: calculus, IE 603F or equivalent. Nonlinear and dynamic programming with special reference to computer analysis of optimization problems.

COURSES

IE 686 Inventory Analysis
Prerequisites: IE 601, IE 607 or QA 605. Inventory theory and practical applications in operating inventory systems. Model construction, optimization and computer simulation.

IE 688 Design of Experiments
Prerequisite: IE 689 or three credit hours of statistical inference. Principles of modern statistical experimentation and practice in use of basic designs for scientific and industrial experiments; single factor experiments, randomized blocks, latin squares; factorial and fractional factorial experiments; surface fitting designs.

IE 689 Descriptive and Inferential Statistics
Prerequisite: IE 607 or equivalent. Inferential statistical designs, including basic statistical tests and analysis of variance. Statistical theories and application of correlation analysis, multiple linear regression, nonlinear regression, and analysis of covariance.

IE 690 Seminar Project
Prerequisites: 15 credit hours and permission of the program coordinator. Independent study under the guidance of an advisor into an area of mutual interest, such study terminating in a technical report of academic merit. Research may constitute a survey of a technical area in industrial engineering, operations research or computer science, or may involve the solution of an actual or hypothetical technical problem.

IE 695 Independent Study I
Prerequisite: permission of the program coordinator. Independent study under the guidance of an advisor into an area designated by the program coordinator.

IE 696 Independent Study II
A continuation of Independent Study I.

IE 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussion of the individual student's progress in the preparation of a thesis.

IE 699 Thesis II
A continuation of Thesis I.

Business Law

LA 673 Business Law I: Contracts and Sales
A study of the legal aspects of contracts and the results of contractual obligations. Legal problems stemming from the sale of goods, including the rights and duties of buyers and sellers and the remedies available to them.

LA 674 Business Law II: Business Organizations and Negotiable Instruments
Prerequisite: LA 673. Introduction to problems of formation and operation of legal groups with particular emphasis on the law of agencies, partnerships and corporations. Course coverage also will include the law of negotiable instruments.

LA 670 Selected Topics
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

LA 690 Research Project
Prerequisite: 15 graduate hours or permission of the instructor. Independent study under the supervision of an advisor.

LA 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

LA 696 Independent Study II
A continuation of Independent Study I.

LA 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

LA 699 Thesis II
A continuation of Thesis I.

Logistics

LG 660 Logistics Technology and Management
Designed to provide to the student a broad survey of the wide range of logistics activities. Subjects covered: the concepts of the integrated logistics management system, customer interfaces, inventory management and support of spares and supplies, physical distribution management as well as the logistical organization, planning and administration. Discussion in the courses includes also the quantitative analytical techniques and computational tools commonly used in the logistical decision-making process.

LG 663 Logistics Management in the System Acquisition Process
Designed to provide students a general knowledge of the management process for the acquisition of equipment and material. Subject topics are: test and evaluations, specifications as a procurement instrument, procurement methods, type of contracts, etc.

LG 665 Integrated Logistics Support Analysis
Designed to provide students an opportunity to understand the concept of Integrated Logistics Support (ILS), and an overview of each of the elements of logistics specialties, their interface and interaction, as well as the integration of the separate logistics specialties into a coherent effort and output. Topics covered in this course are reliability, maintainability, life cycle cost, ILS management and major ILS decisions involved, test and support equipment, personnel and training warranties, etc.

LG 669 Life Cycle Cost Analysis
A study of Life Cycle Cost Analysis (LCCA), a new state-of-the-art management tool used in the defense industry to assist and advise decision-makers to identify a preferred choice among all possible alternatives in acquisition of a new equipment and/or system. Topics discussed will be techniques and concepts such as the total cost concept (e.g., acquisition cost plus the cost of ownership including both the operating cost and the support cost); the fixed cost criterion (e.g., greatest effectiveness); the fixed effectiveness criterion (e.g., least cost) and the marginal utility criterion (e.g., least cost per unit of effectiveness), etc.

LG 670 Selected Topics
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

LG 690 Research Project
Prerequisite: 15 graduate hours or permission of the instructor. Independent study under the supervision of an advisor.

LG 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

LG 696 Independent Study II
A continuation of Independent Study I.

LG 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

LG 699 Thesis II
A continuation of Thesis I.

Mathematics

M 610 Fundamentals of Calculus and Linear Algebra
Prerequisite: M 115 or equivalent. Review of algebra. Topics from calculus, including differentiation and integration methods, applied to problems in science, business, and the social sciences. Linear algebra, systems of linear equations and matrix methods.

M 620 Numerical Analysis
Prerequisite: 9 credit hours of calculus and programming ability in FORTRAN or permission of the instructor. Algorithms for obtaining numerical solutions on computers. Topics include: solution of determinants, solution of systems of linear equations by direct and iterative methods, numerical integration, differentiation and solution of differential equations by finite difference methods. Laboratory fee required.

M 624 Applied Mathematics
Topics in applied mathematics including power series solutions of ordinary differential equations, special functions, matrix theory, and integral transforms.

M 632 Methods of Complex Analysis
Prerequisite: graduate standing in engineering or mathematics. This course is a study of the applications of the methods of complex variables to engineering and physical sciences. Topics include analytic function theory, contour integration and conformal mapping.

M 670 Special Topics in Mathematics
Prerequisite: permission of the instructor. A study of selected topics of particular interest to students and instructor. Course may be taken more than once.

M 690 Research Project
Prerequisite: 15 graduate hours or permission of the instructor. Independent study under the supervision of an advisor.

M 695 Independent Study I
A planned program of individual study under the supervision of a member of faculty.

M 696 Independent Study II
A continuation of Independent Study I.

M 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

M 699 Thesis II
A continuation of Thesis I.

COURSES

Mechanical Engineering

ME 602 Mechanical Engineering Analysis I
Prerequisite: M 624. Topics in complex variables, evaluation of integrals via residue theorem, special functions, solution of partial differential equations by separation of variables and integral transform methods, Green's function.

ME 604 Mechanical Engineering Analysis II
Prerequisite: Knowledge of FORTRAN. Review of matrix algebra and simultaneous equations. Numerical integration and differentiation, including techniques such as Euler, Runge-Kutta, Milne, shooting, Crank-Nicolson and FEM. Emphasis on numerical solutions to ordinary and partial differential equations relevant to Mechanical Engineering.

ME 605 Finite Element Methods in Engineering
Prerequisite: ME 604 or M 620. Basic concepts underlying the FEM. Displacement and Weighted Residual formulations of the finite element approach to numerical solutions. Applications to one- and two-dimensional problems in areas such as Elasticity, Heat Transfer and Fluid Mechanics.

ME 610 Advanced Dynamics
Kinematics and dynamics of single particles and systems of particles. Lagrange's equations. Hamilton's principles and canonical transformation theory. The inertia tensor and rigid body motion.

ME 611 System Vibrations
Advanced techniques for analysis of vibrations in mechanical systems. Multiple degrees of freedom, random noise inputs among topics.

ME 615 Theory of Elasticity
Index notation, Cartesian tensors and coordinate transformation, stress tensor and field equation, analysis of stress and strain in two and three dimensions, Airy stress function, applications to problems of torsion and bending, experimental methods.

ME 620 Classical Thermodynamics
Phenomenological equilibrium and nonequilibrium thermodynamics. Formulation and application of fundamental laws and concepts, chemical thermodynamics.

ME 622 Statistical Mechanics
Development of the molecular theory of matter; classical and quantum statistical results of equilibrium and kinetic properties of solids, liquids and gases.

ME 625 Mechanics of Continua
Prerequisite: ME 615 or permission of the instructor. Tensor analysis, the stress vector and the stress tensor, kinematics of deformation, material derivative, fundamental laws of continuum mechanics, conservation theorems, constitutive laws, and representative applications.

ME 628 Modern Materials
Survey of the forefront of current engineering materials and processing techniques. Representative topics might include composites, superalloys, laser fabrication and continuous casting techniques.

ME 630 Advanced Fluid Mechanics
Advanced topics chosen from among the following areas: perfect fluids, viscous fluids, turbulence, boundary layer theory, surface phenomena, shock waves, and gas dynamics.

ME 632 Advanced Heat Transfer
Review of the basic concepts of conduction and radiation. Detailed treatment of laminar, turbulent, free and forced convectional flows. Computational projects.

ME 645 Computational Fluid Dynamics and Heat Transfer
Prerequisite: ME 630, and ME 604 or M 620. Current methods of computer solutions of the conservation equations of fluid dynamics. Viscous, incompressible, compressible and shock flows. Real gas equations of state. Computer projects.

ME 670 Special Topics—Mechanical Engineering
Prerequisite: permission of the instructor. A study of selected topics of particular interest to students and instructor. Course may be taken more than once.

ME 695 Independent Study I
Prerequisite: permission of program coordinator. Independent study under the guidance of an advisor into an area designated by the program coordinator.

ME 696 Independent Study II
A continuation of Independent Study I.

ME 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

ME 699 Thesis II
A continuation of Thesis I.

Management

MG 625 Systems Techniques in Business Administration

An integrated study of the techniques for solving administrative problems, including the analysis and improvement of organizational structures, office procedures, forms design, records management, reports and equipment standards. The conduct of a comprehensive systems survey using these techniques is explored in depth as are flow charting and the preparation of manuals.

MG 635 Purchasing and Materials Management

This course deals with the management of materials and the procurement function in a business enterprise. The fundamentals auxiliary functions, and management of materials activities provide introduction to an increasingly specialized field of business administration.

MG 637 Management

A study of the functions of management planning, organizing, directing, controlling, coordinating.

MG 638 Cost Benefit Management

Prerequisites: QA 604, EC 603. This course will provide students with an introduction and overview to the field of cost/benefit management. Fundamental theoretical evaluation of cost/benefit of a project will be covered. Other topics discussed include: the selection of the best investment criteria, the external environmental spillover effects, and the application of cost/benefit management in decision making under uncertainty.

MG 640 Management of Health Care Organizations

Identification of the characteristics of health care organizations and the dimensions of management in such organizations. Examination and application of the principles of management necessary for the successful operations of health care organizations. M.B.A. students in the Health Care concentration take MG640 in place of MG637 in the core.

MG 641 Contract Administration

Prerequisite: QA 600 or equivalent. The administrative aspect of the contract, modification, evaluation, and sub-contracting. Importance is given to value analysis as it effects government property and affects by action of the contractor and the government. Other issues are covered such as financial and pattern rights.

MG 645 Management of Human Resources

A study of organizational practices in the management of human resources. Manpower planning, recruitment, selection, training, compensation and contemporary problems of the field.

MG 650 Venture Management

Prerequisites: A 621, FI 615, MG 637, MK 609, or permission of the instructor. Deals with the establishment of a new business venture, covering such topics as site development, market analysis, staffing, inventory control, personnel relations and funding.

MG 660 Comparative Management

Prerequisite: MG 637. The main focus of this course is to develop an understanding of managerial practices in different organizations and systems. A conceptual framework is developed for the analysis of interaction between managerial processes and cultural factors as they affect the management of enterprises in various organizations and systems.

MG 661 Development of Management Thought

Prerequisite: MG 637. Study of the literature from various disciplines in order to determine the thinking and practices of leaders of organizations, past and present. The historical perspective of management thought will be developed. The contributions of religion, philosophy, economics, sociology and psychology to management thought and practice will be examined. Emphasis on pioneering works in the management of organizations. Case studies of the thinking and practices of famous leaders of American business enterprises.

MG 662 Organization Theory

Prerequisite: MG 637. A survey of the literature on theories of organization with emphasis on contemporary theories. Application of the theories to management and organizational problems will be attempted. Difficulties arising between theory and practice will be examined.

MG 663 Leadership in Organizations
Prerequisite: MG 637. Examination of theories and research findings from the behavioral sciences that are relevant to leadership in organizations. The role of the leader within the organization; the prerequisites, knowledge and practices required for successful leadership will be studied. Programs for the development of leaders will be explored.

MG 664 Organizational Effectiveness
Prerequisite: MG 637. Identification of the criteria necessary for developing and maintaining effective organizations. A study of the concepts that may be utilized in the management of these criteria. Approaches that may be examined and applied to problem situations through cases and role playing.

MG 665 Compensation Administration
Prerequisites: MG 645 and EC 635. A study of the compensation function in organizations. Establishing wages and salaries, fringe benefits and incentives.

MG 669 Business Policy and Strategy
Prerequisites: MG 637 and 3 credit hours of 600-level MG course work. Management policies and strategies for the complex organization operating in a dynamic environment are examined from the viewpoint of the top-level executives of the organization. Develops analytical frameworks for the management of numerous elements involved in assuring the fulfillment of the goals of the total organization. Integrates the student's general business knowledge with the required courses in the M.B.A. program. Emphasis is placed on the development of oral and written skills by the examination and discussion of cases.

MG 670 Selected Topics
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

MG 675 Readings in Management
A seminar. Examines the literature in selected areas of management.

MG 678 Personnel Management Seminar
Prerequisites: MG 637, MG 645, P 619 & EC 625. A seminar in the personnel and manpower management function of the modern work organization. The use of an integrated behavioral, quantitative, and systems approach permits an applied multidisciplinary synthesis of the various aggregate manpower management subsystems required in the modern work organization.

MG 679 Industrial Relations Seminar
Prerequisites: MG 637, P 619, EC 625 & EC 687. A seminar in industrial relations and the labor-management relations function of the modern work organization. The use of an integrated behavioral, economic, and legal approach permits an applied multidisciplinary synthesis of the employee relations function required in either non-unionized or unionized work organizations.

MG 680 Current Topics in Business Administration
Prerequisite: 15 graduate hours or permission of the instructor. An integrative course that will examine the role of business in society and relate the business firm to its social, political, legal and economic environment. While the exact content of this seminar is expected to vary from semester to semester in accordance with the varied academic interests and professional backgrounds of different faculty handling the course, the basic theme is the role of the business firm as the "keeper" of the market mechanism and the means for organizing resources in the economy.

MG 685 Research Methods in Business Administration
Prerequisite: QA 604 or equivalent. Designed to familiarize administrators of social research and to assist them in the presentation, interpretation and application of research data.

MG 690 Research Project
Prerequisite: 15 graduate hours or permission of the instructor. Independent study under the supervision of an advisor.

MG 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

MG 696 Independent Study II
A continuation of Independent Study I.

MG 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

MG 699 Thesis II
A continuation of Thesis I.

Marketing

MK 609 Marketing
Prerequisites: EC 603-604. An intensive study of modern marketing fundamentals, a study of the decision-making problems encountered by the marketing executive and the relation of marketing to environmental forces.

MK 616 Buyer Behavior
Prerequisite: MK 609. An examination of the principal comprehensive household and organizational buyer behavior models and the behavioral science theories upon which such applied models are based. The buyer is analyzed at the individual level, at the social level and at the organizational level.

MK 639 Marketing Research and Information Systems
Prerequisites: MK 609, QA 605. A managerial approach to marketing information flow, including recognition of information needs and an overview of marketing research as part of an information system. Special attention to evaluation of research design and measurement methods, effective utilization of research output, and problems encountered in establishing a marketing information system.

MK 641 Marketing Management
Prerequisite: MK 609. The treatment of the basic decision problems of marketing management in terms of a conceptual framework for analysis. Consideration of the role played by human judgments and the mathematical tools available to aid in these judgements in a number of marketing areas, notably market analysis, pricing decisions, advertising decisions, promotional decisions and selection of distribution channels.

MK 643 Product Management
Prerequisite: MK 609. The search for new product ideas and their evaluation; the organization structure necessary to the development and introduction of new products and the management of a product line; the commercial aspects of product design, packaging, labeling and branding; considerations involved in making product deletion decisions; and the social and economic effects of managing product innovation.

MK 644 Consumerism
Prerequisite: MK 609. An analysis of the evolution of the consumerist movement; how and why it has developed; government agencies dealing with consumer problems; the impact of various market structures on the consumer; the impact of consumer-oriented legislation on marketing strategies; and the responsibility of business to the consumer and to society.

MK 645 Distribution Strategy
Prerequisite: MK 609. Analysis of channel strategies; theory and economic justification of distribution channels; direct and indirect methods of control; behavioral states of channel members; costing the channel; and management of changes in distribution.

MK 670 Selected Topics
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

MK 680 Marketing Workshop
This course is centered around a structural model of a business firm. The major objective is to provide the student with an opportunity to develop managerial insights and skills in dealing with marketing problems in a competitive environment. Each of the participants is grouped into decision-making units (companies) and assumes the role of a marketing executive operating a business firm. These executives will be responsible for planning, organizing, staffing, directing and controlling their firm's resources.

MK 690 Research Project
Prerequisite: 15 graduate hours and permission of the instructor. Independent study under the supervision of an advisor.

MK 692 Readings in Marketing

MK 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

MK 696 Independent Study II
A continuation of Independent Study I.

MK 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

MK 699 Thesis II
A continuation of Thesis I.

COURSES

Psychology

P 605 Survey of Community Psychology
An examination of historical roots and current concepts. A social-problems approach to psychological dysfunction. Changing professional roles. Community organization and human service delivery; strategies of intervention and community change.

P 607 Special Problems in Community Psychology
Theory and practice of community psychology with selected problems, populations and settings. Emphasis on community psychology service issues and problems in the Connecticut area.

P 609 Research Methods
Prerequisite: Undergraduate course in statistical methods. Introduction to analytic concepts pertinent to sampling techniques, research design, variable control and criterion definition. Basic problems of measurement, research paradigms, sources of error in research interpretation, problems of variable identification and control, and consideration of the logic of inference.

P 610 Program Evaluation
Prerequisite: P 609. A systematic study of the processes involved in planning, implementing and evaluating organizational programs. The focus is on action research strategies which integrate the entire process from planning to the evaluation of the program.

Practicum Seminars and Field Work

An apprenticeship or on-the-job role in an ongoing program or center. Emphasis on developing conceptualizations and insights as a result of involvement in the apprenticeship. Placement at a field site for 8 to 10 hours per week. Weekly class meetings serve two purposes: to present specific theoretical material and research findings appropriate to each seminar and to allow students to discuss their field training experiences.

P 611 Practicum Seminar I: The Dyadic Relationship
Content focuses upon one-to-one relationships in community psychology. See general description above.

P 612 Practicum Seminar II: Models of Consultation
Content focuses upon community consultation. See general description above.

P 613 Practicum Seminar III: Systems Intervention
Content focuses upon intervention into and change in community systems. See general description above.

P 614 Field Work I
See general description above. 2 credit hours.

P 615 Field Work II
See general description above. 2 credit hours.

P 616 Field Work III
See general description above. 2 credit hours.

P 618 Community Mental Health Philosophy and Concepts
Considerations of the philosophical bases which underlie traditional approaches to mental health. A study of the implied cultural values and attitudes which have determined the locations, the settings, the methods and the objectives of mental health treatment concepts, programs and techniques.

P 619 Organizational Behavior
Analysis of various theories of business and managerial behavior emphasizing the business organization and its internal processes. Psychological factors in business and industry, including motivation, incentives and conflict. A study of research findings relevant to an understanding and prediction of human behavior in organization.

P 620 Industrial Psychology
Psychological theories and research applied to business and other organizations. Problems and methods in selection and placement, training, performance appraisal, motivation and leadership.

P 621 Behavior Modification
Theory and research in behavior modification. Aversive learning, desensitization, operant conditioning. Applications in clinical and non-clinical settings.

P 623 Psychology of the Small Group
Analyses of the behavior and interaction of people in mutual gratification groups, committees, work groups and clubs.

P 625 Developmental Psychology
In-depth exploration of development through the life cycle and the developmental impact of family, neighborhood, schools, work, class, race, sex, etc.; key theoretical concepts; research findings; community intervention.

P 627 Attitude and Opinion Measurement
Prerequisite: P 609. Examination of modern methods of attitude and opinion measurement. Scale, schedule, and interview formats. Respondent sets. Consideration of sampling problems.

P 628 The Interview
The interview as a tool for information gathering, diagnoses, mutual decision making and behavior change. Use of role playing provides the student with insights into nuances of interpersonal relationships. Applications to selection, counseling and other situations.

P 629 Introduction to Counseling
The roles of the client and the counselor in the counseling relation. Examination of underlying assumptions.

P 630 Psychology of Personality
Major personality theories and their implications. Examination of the psychological and organic factors involved in personality development and expression.

P 631 Social Psychology
Current problems in social psychology. Attitude scale construction, attitude change, language as a social phenomenon, patterns of culture, social class, groups, person perception and conformity.

P 632 Group Dynamics and Group Treatment
An exploration of the emerging area of group dynamics. The structure of groups, their development, process interaction analysis, formal and informal groups, group psychotherapy and sensitivity training.

P 633 Problems of Drug Abuse
Discussion of selected issues and current problems in drug abuse.

P 634 Personality Assessment
A critical survey of the theories and issues of personality assessment. Topics include intelligence, achievement and ability assessment. Personality tests and ethical questions associated with psychological testing.

P 635 Assessment of Human Performance with Standardized Tests
Prerequisite: P 609. Theories, assumptions and constraints underlying construction and application of standardized tests employed in clinical, educational, governmental and industrial settings. Emphasis on selection of appropriate standardized tests for specific applications.

P 636 Abnormal Psychology
Etiological factors in psychopathology dynamics and classification of neuroses, psychophysiologic conditions, psychoses, personality disorders, organic illness, retardation and childhood diseases.

P 638 Psychology of Communication and Opinion Change
Characteristics of the source, the situation, and content of messages, along with other variables influencing attitudinal modification. Cognitive factors and social settings in attitude change.

P 640 Industrial Motivation and Morale
Prerequisite: P 619. The meaning of work; theories of motivation. Stimulus deprivation and expectation of reinforcement; job satisfaction and motivation; pay as an incentive; interventions to increase work motivation. Case studies.

P 641 Personnel Development and Training
Prerequisite: P 619 or P 620. Identification of skills and developmental needs, both from an organizational and individual perspective. Techniques for assessment and development of skills, especially at the managerial level. Training approaches. Evaluation of training efforts.

P 642 Organizational Change and Development
Prerequisite: P 619. The nature of organization development, intervention by third-party consultation, change in organization structure and role relationships, managerial grid, participation, conformity and deviation.

COURSES

P 645 Seminar in Industrial/Organizational Psychology
Prerequisites: P 609 and P 619. An examination of the professional psychologist at work in organizations. Emphasis on measurement methods, prediction, validation, selection, training, and performance appraisal; practitioners in business, industry, research organizations and government will provide insights into the application of psychological principles and methods.

P 650 Ecological Psychology
An in-depth study of the relationship between molar human behavior and the sociophysical settings in which it occurs. Human behaviors are conceptualized as adaptive responses to environmental and organizational systems that provide their contexts. Particular emphasis will be placed on the ecological match between organizations and their members.

P 660 Contemporary Issues in Industrial/Organizational Psychology
Prerequisite: 12 hours in psychology or consent of the instructor. In-depth investigation of topical areas of concern in industrial/organizational psychology. Topics may include, but are not limited to, the impact of EEOC regulations on selection and promotion; assessment centers; the role of the consultant in organizations; flextime, day care, and other strategies to accommodate family needs of employees; stress in work settings; women in management. Content will be stated at the time the course is scheduled. Students may petition for a particular topic they feel would fit their academic goals. May be taken twice.

P 670 Selected Topics
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

P 672 Psychology of the Middle and Later Years
A comprehensive consideration of the psychological aspects of the aging process. Sensation, perception, cognition, intelligence, problem solving, memory and sexuality, personality changes. Disengagement, rigidity. Death and its anticipation.

P 678 Practicum I
For students already employed in a managerial or supervisory role. A job-related research project is carried out under faculty supervision.

P 679 Practicum II
Prerequisite: P 678.

P 693 Organizational Internship I
For students without experience at the managerial or supervisory level. Under faculty supervision, the student engages in field experience in an industrial setting.

P 694 Organizational Internship II
Prerequisite: P 693.

P 695 Individual Intensive Study I
Prerequisite: completion of required courses or 24 graduate hours and written approval of department chairman. Provides the graduate student with the opportunity to delve more deeply into a particular area of study under faculty supervision.

P 696 Individual Intensive Study II
Prerequisite: P 695.

P 698 Thesis I
Prerequisite: completion of all required courses or 24 graduate hours and written approval of department chairman. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

P 699 Thesis II
Written approval of departmental chairman. A continuation of Thesis I.

Public Administration

PA 601 Principles of Public Administration
The development, organization, functions and problems of national, state and local governmental administration.

PA 602 Public Policy Formulation and Implementation
The relationship between public administration and the formulation of public policy is studied. The implementation of public policy by administrators based on the politics of the administrator is examined in terms of interaction between various group representatives, i.e., the legislators, the politician, and pressure group leaders.

PA 604 Communities and Social Change
Interactions among the community as a social organization and education, police and welfare institutions within it; special attention to conceptual frameworks and current research or action programs that particularly affect minority groups.

PA 611 Research Methods in Public Administration

Designed to familiarize administrators with the tools and potentialities of social research, and to assist them in the presentation, interpretation and application of research data.

PA 620 Personnel Administration and Collective Bargaining in the Public Sector

Study of the civil service systems in the United States and the state governments, including a systematic review of the methods of recruitment, promotion, discipline, control and removal. Explores the effects on work relationships of collective bargaining statutes which have been adopted by legislatures. Emphasis is placed on collective bargaining case studies from state and local governments and hospitals.

PA 625 Administrative Behavior

Recommended prerequisite: PA 601. The problems faced by an administrator in dealing with interpersonal relationships and human processes. Analysis of individual and group behavior in various governmental and business settings to determine the administrative action for the promotion of desired work performance. Emphasis given to the public sector. Participation in actual problem situation discussions and case studies.

PA 630 Governmental Accounting

Recommended prerequisite: PA 601. The problems faced by a survey of the essential principles of governmental accounting, budgeting, cost accounting, and financial reporting. The various operating funds, bonded debt, fixed assets, investments, classification of revenue and expenditures, general property taxes and interfund relationships.

PA 632 Public Finance and Budgeting

Recommended prerequisites: PA 601, EC 608, PA 604. State and local expenditure patterns, state and local revenue sources, income taxation at the state and local level, excise taxation, sales taxation, taxation of capital and the property tax. Emphasis on fiscal and economic aspects of federalism and federal-state fiscal coordination. The role of the budget in the determination of policy, in administrative integration, in control of government operations.

PA 634 Problems of Municipal Management

Study of selected problems of city management with emphasis on "housekeeping" and line operations.

PA 635 Statistics for Public Administrators

Provides a basic theoretical treatment of the nature of statistical analysis and its role in economic research design and procedure.

PA 641 Financial Management of Health Care Organizations

Theory and application of financial planning and management techniques in health care organizations. Emphasis is on financial decision making, preparation of short-term and long-term cash, capital, and revenue and expense budgets and financial plans to meet the requirements of HCFA and other third parties.

PA 642 Health Care Delivery Systems

This course deals with a contemporary analysis of health care delivery systems in the U.S. Financial, cost, economic, political and organizational issues will be discussed.

PA 643 Health and Institutional Planning

Designed to develop skills and understanding of the dynamics of health and social planning processes with respect to consumer demand, national and local health goals and the optional location of facilities, services and manpower.

PA 644 Administration of Programs and Services for the Aged

The structure, function and properties of publicly and privately funded programs and service organizations providing health services to the aged. The economic, political, legal and social issues which affect the administration of human service organizations will be studies, with emphasis on administration of health care services.

PA 645 Health Care Economics and Finance

Recommended prerequisite: PA 641. This course integrates the accounting, economics, finance, budgeting, and heath insurance principles, concepts and analytical tools which are essential to the decision-making processes of health care organizations.

PA 650 Administrative Law

A search for principles and criteria against which public interest can be balanced with private right in the changing patterns of government, with particular reference to the American system.

COURSES

PA 660 Urban Planning: Theory and Practice
Explores the concept of physical planning within the urban developmental framework. The function of planning in its relationship to the environment. Comprehensive planning with its many ramifications involving the various sections of our society. Methods for analyzing problems as well as design methods for problem solving.

PA 661 Problems of Metropolitan Areas
Analysis of the problems of government and administration arising from the population patterns and physical and social structures of contemporary metropolitan communities.

PA 663 Urban Housing
Encompassed are the subjects of housing management, planning, finance and policy. Specific topics such as the provision of low-income housing, the use of mortgage insurance, interest subsidies, site planning, rent controls, code enforcement, mortgage markets, and the rise of housing abandonment are stressed.

PA 670 Selected Topics
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

PA 671 Administrative Problems
Exploration of the practical experiences and problem-solving situations in the day-to-day activities of a public administrator.

PA 680 Seminar in Public Administration
Exact material to be covered will be announced.

PA 690 Research Seminar
A core course required of all students. Students will undertake a major independent research study and participate in an integrative seminar on research and its uses in public administration.

PA 691 Research Project
Prerequisites: 15 graduate hours, permission of the public administration graduate program coordinator. Independent study for advanced graduate students on selected problems in public administration. May be taken more than once.

PA 692 Readings in Public Administration
Prerequisite: 15 graduate hours or permission of the instructor.

PA 693 Public Administration Internship
Prerequisites: 15 graduate hours, permission of the public administration graduate program coordinator. A supervised work experience in a cooperating public service agency. Students must be available for at least one day per week.

PA 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

PA 696 Independent Study II
A continuation of Independent Study I.

PA 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussion of the individual student's progress in the preparation of a thesis.

PA 699 Thesis II
A continuation of Thesis I.

Physics

PH 680 Special Topics—Physics
Prerequisite: permission of the instructor. A study of selected topics of particular interest to students and instructor. Course may be taken more than once.

Philosophy

PL 601 Business Ethics
Problems considered include the nature of the corporation, the values of business activity, corporate social responsibility, the proper relationship between the corporation and government, employee rights, and related matters. Problems are analyzed using the most important current theories of social and economic justice.

Political Science

PS 601 Constitutional Law
A study of the relation of the judicial process and constitutional law to the political process in the United States. Judicial review, federalism and separation of powers.

PS 602 Civil Liberties and Rights
An analysis of civil liberties, civil rights, due process, and equal protection of the law. An examination of the role of the public official in the protection, denial or abridgement of the constitutional and legal rights of individuals.

PS 603 International Law
A study of the role of international law in the modern state system with particular reference to individuals; territorial jurisdiction; law of the sea, air and space; and the development of law through international organizations.

PS 604 Human Rights and the Law
An examination of the development of the international and national laws establishing human rights, the laws of war, war/criminality, crimes against humanity, and the application of the universal declaration of human rights of the Helsinki accords, and the concept of the individual as the basis of law.

PS 605 Criminal Law
Scope, purpose, definition and classification of criminal law. Offense against the person; habitation and occupancy. Offenses against property and other offenses. Special defenses. Emphasis on the Connecticut penal code.

PS 608 The Legislative Process
An analysis of the legislative process in the American political system. Stress will be placed on legislative politics in state and local government. Among areas covered will be legislative functions, selection and recruitment of legislative candidates, legislative role orientations, the legislative socialization process, the committee system, the legislators and their constituencies, legislative lobbyists, legislative decision making, legislative-executive relations and legislative organization and procedures.

PS 610 Legal Methods I
A study of procedure and process of the law as it applies in the American system.

PS 612 Contracts, Torts and the Practice of Law
An introduction to the most important components of private law, that is, contracts, torts and civil procedure and their application to business, government and individuals.

PS 613 Political Justice
This course will explore the relationship between legal issues and the political environment in history, including an examination of notable political trials, legislative investigations and regulatory decisions.

PS 615 Jurisprudence
The purpose of this course is to provide the general philosophical framework for all the law courses in the legal studies program. The course will include the background and development of the common law, sources of the law, and the court system. Special problems in Anglo-American jurisprudence are reviewed.

PS 616 Urban Government
An examination of the urban political system. Stress will be placed on the political aspects of urban government structures. Among the areas covered will be formal and informal decision making in urban government, community power structures, types of urban government structures, the politics of inter-governmental relations and the politics of servicing the urban environment (social services, planning agencies, education, housing, transportation, health, pollution control and ecology, revenue sharing, public safety, neighborhood corporations, etc.).

PS 617 Law, Science and Ethics
The intersection of law, science and ethics in a variety of contexts, including experimentation with human subjects, psycho-surgery, genetic engineering, organ transplants, abortion and the right to die.

PS 625 Transnational Legal Structure
An introduction to the basic structure of legal systems in other countries, their relationship to Anglo-American law and their contextual development. Special topics include: legal status of foreign and multinational corporations, rights and responsibilities of aliens, protections for investors, expropriation and procedural due process.

PS 626 Decision Making in the Political Process
An in-depth study of decision making in the American system with special emphasis upon the various types of mechanisms, i.e., executive, legislative, judicial, bureaucratic, organizational and military. The influence of intelligence, economic and psychological factors and social pressures upon decisions and decision makers will be examined.

PS 628 Change and Government
A study of the major processes of change and their consequences for the functioning of government. The course will concentrate upon changes that may occur through violence, evolution or technology, and which may alter the effective operation of government.

COURSES

PS 633 The Political Process and the Aged
A study of the political process as it relates to the aged. Governmental decision making on federal, state and local levels including legislation and its implications.

PS 635 Law and Public Health
A course for the civil servant or health professional concerned with the laws relating to the public health at the federal, state and local level as well as the practical administration of those laws.

PS 641 The Politics of the World Economy
An examination of the global politico-economic system and the challenges facing world diplomacy. Multinational corporations and political structures designed to coordinate global policies for the monetary and trade systems, international organizations and their impact on third world development, and problems facing industrialized nations will be analyzed.

PS 645 Government and the Industrial Sector
This course examines the various impacts of government regulation on the corporate sector and the major legal and regulatory requirements affecting business and industry.

PS 652 Legal Administration
Examination of the structure and process of legal administration in the United States and the types of issues arising within it. It includes a discussion of the relationship among social, economic and political factors and their effects on administration of law and public policy in contemporary issue areas.

PS 655 Conflict Resolution
A course covering the essential features and methods available within the legal system to resolve disputes, including the uses of law, equity, administrative agencies, bureaucracies, arbitration, mediation, special commission and private self-help. Consideration will be given to the applicability of those methods to various types of disputes and will touch upon the choice of law in instances when no single rule may govern in a federal system.

PS 670 Special Topics
Items of special interest might include: First Amendment problems, energy and the law, law and the environment, labor legislation and the law, law and commercial paper and stock issues. May be taken more than once.

PS 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

PS 696 Independent Study II
A continuation of Independent Study I.

PS 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussion of the individual student's progress in the preparation of a thesis.

PS 699 Thesis II
A continuation of Thesis I.

Quantitative Analysis

QA 600 Quantitative Analysis
Basic mathematics for solving economic and business problems. Topics include algebra review, equations and inequalities, graphs, exponential and logarithmic functions, an introduction to matrix algebra. No credit.

QA 604 Probability and Statistics
Prerequisite: QA 600 or equivalent. An introduction to business statistics. Topics include data analysis and presentation, frequency distributions, probability theory, probability distributions, decision making under uncertainty, sampling and statistical inference, hypothesis testing, t, chi-square, and F tests.

QA 605 Advanced Statistics
Prerequisite: "B" or better grade for QA 604 or equivalent. A continuation of QA 604. Topics include simple regression and correlation, multiple regression, analysis of variance, the general linear model and an introduction to time series analysis and forecasting techniques.

QA 606 Advanced Management Science

Prerequisites: IE 601, QA 604-605. An examination, from a management viewpoint, of the scope of applicability of the methods and models developed in IE 601, Introduction to Operations Research/ Management Science, and QA 604-605, Probability and Statistics, and Advanced Statistics. Topics include parametric programming and economic interpretation of the dual LP problem, marginal costs and revenues, shadow prices, opportunity costs, incremental costs, costs of deviation from optimal solution point(s), and location or construction of desirable alternate optimal solutions.

QA 607 Forecasting

Prerequisite: QA 605 or permission of the instructor. This course will present a wide range of forecasting methods useful to students and practitioners of management, economics and other disciplines requiring forecasting. The course will focus on quantitative techniques of forecasting and will include: smoothing and decomposition approaches, multiple regression and econometric models, and autoregressive/moving average methods including generalized adaptive filtering and Box-Jenkins methodology.

QA 670 Selected Topics

A study of selected issues of particular interest to the students and instructor. Course includes applied regression analysis, analysis of variance, factor analysis, multivariate analysis, nonparametric statistics and simulation. May be taken more than once.

QA 690 Research Project

Prerequisite: 15 graduate hours or permission of the instructor. Independent study under supervision of an advisor.

QA 695 Independent Study I

A planned program of individual study under the supervision of a member of the faculty.

QA 696 Independent Study II

Prerequisite: QA 695.

QA 698 Thesis I

Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

QA 699 Thesis II

Prerequisite: QA 698. A continuation of QA 698, Thesis I.

Science

SC 601 Introduction to Ecology

An introduction to the biological aspects of environmental problems. Includes discussion of the concepts of bioecology, organisms (microorganisms, plants, animals) important in pollution control and detection, and human organ systems most affected by pollution.

SC 602 Pollutants and the Aquatic Environment

Prerequisite: SC 601. Discusses the interralationships among the various kinds of pollutants, the morphology of the lake, river, or coastal area, and the effects on the individual organism and the ecosystem as a whole. Treatment methods using organisms are also discussed.

SC 603 Air Pollution

Prerequisite: SC 601. An introduction to air movements in the atmosphere and their relation to pollutants; the effect of air pollution upon organisms with special emphasis on the effects on human beings.

SC 608 Water Quality

Prerequisite: SC 601 or undergraduate biology major. Recognition of the organisms and substances of polluted waters; the selection of the appropriate methods for collection, testing, and analysis of the data. The functions and interrelations of governmental agencies in controlling water pollution.

SC 610 General Environmental Health

Prerequisite: SC 601 or undergraduate biology major. Principles of public health with general emphasis given to environmental factors such as air and water pollutants, legal standards and preventative measures and their relationships to public health.

SC 612 Freshwater Ecology

Prerequisite: SC 601 or undergraduate bioecology course. Investigation of physical, chemical, and biological relationships in lakes, ponds, and rivers. Emphasis on factors relating to eutrophication problems and the manner in which ecological studies are conducted.

SC 613 Marine Ecology

Prerequisite: SC 601 or undergraduate bioecology course. Investigation of physical, chemical and biological relationships in oceans, coastal waters, and estuaries. Emphasis on factors and environments encountered in pollution problems and the manner in which ecological studies are conducted.

COURSES

SC 615 Life Cycle Nutrition
Prerequisites: Introductory Nutrition, Introductory Biology, Introductory Chemisty, or by special permission. A review of the structures, properties, sources and actions of the major nutrients. Discussion of the relationships of the nutrients to various physiological processes. Emphasis on nutritional needs during the various stages of life. Therapeutic nutritional applications presented where applicable.

SC 616 Geriatric and Advanced Nutrition
Prerequisites: SC 615 or strong background in nutrition. Latest concepts of nutrition discussed. Reports from current journals presented. Special emphasis given to nutritional problems of the aged. Preventative and therapeutic nutrition covered.

SC 621 Microbiology
Prerequisites: SC 301, or permission of the instructor. Use of current literature to view the beneficial and deleterious impacts of microorganisms, from viruses to fungi, on the environment. Topics will be diversified and dependent upon student preference.

SC 622 Bacteriology
Prerequisites: SC 301, SC 302, or permission of the instructor. Study of the characteristics basic to classification of bacteria. Group-by-group study of bacteria with emphasis on the major detrimental and beneficial contributions of each group as they affect man and the environment. Students will be expected to survey recent findings in scientific publications.

SC 642 Physical Aging
Prerequisite: SC 121 or some undergraduate biology. A study of the aging process in man and its effects on the various component systems of the body—muscular, skeletal, endocrine, etc.—in health and disease.

SC 670 Selected Topics
Prerequisite: 9 graduate hours. A study of selected issues of particular interest to the students and instructor. May be taken more than once.

SC 690 Research Project
Prerequisite: permission of the instructor. Independent study under the supervision of an advisor.

SC 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

SC 696 Independent Study II
A continuation of Independent Study I.

SC 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussions of the individual student's progress in the preparation of a thesis.

SC 699 Thesis II
A continuation of Thesis I.

Occupational Safety and Health Management

SH 602 Safety Organization and Administration
Intensive study of the occupational safety and health field as it currently exists. History and growth of industrial safety. Motivational and psychological aspects of accident prevention. Legal aspects of safety, including worker compensation and state and federal regulations. Engineering needs. Development of voluntary standard systems. Fire prevention, industrial hygiene and future directions.

SH 605 Industrial Safety Engineering
An analysis of the major physical hazards in industrial work and the attendant safety practices employed to eliminate the hazardous condition or minimize the likelihood and extent of injury. This includes the hazards associated with machinery, combustion, electricity, material handling and fire.

SH 608 Industrial Hygiene Practices
Recognition of the magnitude and extent of the health hazards characteristic of industrial work. An evaluation of the danger, the control of the hazard, and the protection of the worker.

SH 611 OSH Seminar
The students and OSH faculty will meet once a week for 1-hour throughout the trimester. The student will pick a topic from the current occupational health and safety problems, conduct literature search and prepare a formal talk for 45 minutes with audiovisuals, etc. The student will then present it on assigned date for 45 minutes and will answer any questions for the remaining 15 minutes either from faculty or students. 1 credit hour.

SH 615 Industrial Toxicology
Introduction to environmental and industrial toxicology; toxicologic evaluation; the mode of entry, absorption and distribution of toxicants; the metabolism and excretion of toxic substances; interactions between substances in toxicology; toxicologic data extrapolation; particulates; solvents and metals; agricultural chemicals—insecticides and pesticides; toxicology of plastics; gases; food additives; plant and animal toxins; carcinogens, mutagens and teratogens.

SH 620 Occupational Safety and Health Law
A survey of the major federal Occupational Safety and Health laws with an emphasis on the Occupational Safety and Health Act of 1970 (Public Law No. 91-956) as well as state and federal workman's compensation law. Studies will focus on the Administration of the laws, their major provisions, the enforcement process as well as the federal/state interrelationships in this milieu. 2 credit hours.

SH 630 Product Safety and Liability
An investigation into the legal pitfalls and the human concerns inherent in the marketing and consumption of goods: sellers responsibility, product liability, insurance, labeling requirements. The Consumer Product Safety Act and related acts, the procedures for minimizing legal risk and maximizing human safety and health.

SH 660 Industrial Ventilation
A thorough study of industrial ventilation systems including theory of design, air pollution control, life cycle costs, automatic controls, instrumentation, relevant codes and standards, and the evaluation of system performance.

SH 670 Selected Topics
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

SH 690 Research Project I
Prerequisite: permission of the instructor. Independent study under the supervision of an advisor. 1-3 credits.

SH 691 Research Project II
Prerequisite: SH 690. 1-3 credits.

SH 693 OSH Internship I
This will be coordinated with the local industry or governmental agencies such as OSHA, NIOSH and EPA. It involves practical problems in occupational safety or industrial hygiene and step by step approach on how to solve these problems under the supervision of a practicing professional. At the end of the project a report will be prepared by the student and be presented to the OSH faculty for grade evaluation. 1-3 credits.

SH 694 Internship II
A continuation of Internship I. 1-3 credits.

SH 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty. 1-3 credits.

SH 696 Independent Study II
A continuation of Independent Study I. 1-3 credits.

SH 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussion of the individual student's progress in the preparation of a thesis.

SH 699 Thesis II
A continuation of Thesis I.

Sociology

SO 601 Minority Group Relations
An interdisciplinary survey of minority groups in the United States with special reference to ethnic, religious and racial factors that influence interaction.

SO 610 Urban Sociology
Prerequisite: PA 604. The problem of urban growth and development. Residential patterns together with the physical development of cities and the redevelopment plans. An examination of the people and their relationships to the environment.

COURSES

SO 620 Sociology of Bureaucracy
A study of some of the classic conceptualizations of bureaucracy and their relevance to the structure and functioning of American economic and governmental institutions. The course will be designed to give students informational and experiential resources with which they, as planners and managers, can improve their abilities to make effective policy decisions. Strongly recommended for gerontology students.

SO 641 Death and Suicide
In-depth analysis of suicide. Traditional theories of suicide are analyzed regarding the psychological approach as well as the demographic and group analysis of sociology. The goal of the course is both academic and practical, stressing community application. Strongly recommended for gerontology students.

SO 649 Seminar in Health and Social Policy
Prerequisite: consent of instructor. Analysis of the legal, political, social, economic and organizational factors in planning and providing health care services with emphasis on policy formulation and implementation. Current health policy issues will be discussed.

SO 651 Social Gerontology
Basic introduction to the field of gerontology. Discusses the history and definition of the field, the contributions of academic disciplines to the field, various perceptions of aging, and explores the basic theories, problems and prospects of gerontology. Required of all gerontology students.

SO 652 Seminar in Gerontology
The seminar will focus on a topic or a series of topics crucial to the analysis of the gerontological phenomenon, and will explore interdisciplinary techniques and findings. Required of all gerontology students.

SO 670 Selected Topics
A study of selected issues of particular interest to the students and instructor. May be taken more than once.

SO 695 Independent Study I
A planned program of individual study under the supervision of a member of the faculty.

SO 696 Independent Study II
A continuation of Independent Study I.

SO 698 Thesis I
Prerequisite: 15 graduate hours. Periodic meetings and discussion of the individual student's progress in the preparation of a thesis.

SO 699 Thesis II
A continuation of Thesis I.

Social Welfare

SW 651 Social Work with the Elderly I: Individuals, Families, Groups
This course will deal with the problems of aging, focusing particularly on the individual and the immediate family. Emphasis will be placed on the role of social work in helping the individual and the family to deal with issues of discrimination, medical and psychological problems, parent-child conflicts, death and dying.

SW 652 Human Services and the Elderly II: Programs, Planning, Policies
An introduction to the variety of private and public social service programs available to the elderly. An attempt will be made to identify gaps and propose alternatives for future programming.

STUDENT SERVICES

Alumni Office

Membership in the Alumni Association is acquired immediately upon graduation. Including the class of 1982 there are more than 14,000 members of the Alumni Association. The alumni director, with the assistance of the Alumni Association president, conducts the affairs of the association during the period between meetings which occur four times per year.

As a member of the Alumni Association, graduates receive an alumni card which enables them to use the university library, gymnasium facilities and the services of the Career Development Office. The card also allows admission to UNH home athletic events. *Insight*, an all-college publication, is mailed to all alumni four times per year. Homecoming, an annual event in the fall, and other educational and social events are open to all alumni. Alumni volunteers play an important role in the annual giving campaign.

The Alumni Association is represented on the Board of Governors by a member who is elected for a term of two years. The president of the association serves on the Board of Governors as an ex-officio member.

Members of the Alumni Executive Board are elected for two-year terms. The Alumni Council numbers approximately 30 people, and is an advisory board to the university on alumni relations. Its primary objectives are to strengthen alumni relations and promote communication between the alumni and the university as a whole.

Athletics

Graduate students are encouraged to make use of the North Campus athletic complex. Facilities include three basketball courts, handball-paddleball court, weight room with universal gym, a multipurpose exercise room, steam room, fully equipped training room, six tennis courts, two softball fields, baseball diamond and combination football-soccer-lacrosse field.

Graduate students are eligible to take part in the intramural competition in touch football, badminton, bowling, three- and five-player basketball, paddleball, softball, tennis, floor hockey and volleyball.

Campus Store

The Campus Store provides all necessary texts, new and used, that are required for courses at the university. It also carries related supplies, greeting cards, imprinted clothing, gifts, candy and a selection of paperbacks, newspapers and periodicals. The Campus Store buys back used texts on a daily basis throughout the year. It also orders class rings and handles film processing for the campus community.

Special arrangements are made for students taking courses at off-campus locations to purchase required books at or near off-campus centers.

Career Development and Off-Campus Employment Office

The Career Development Office offers individual counseling; special workshops on resume preparation, interviewing skills and job research techniques; as well as a monthly professional career testing service. Many employers conduct job interviews at the Career Development Office throughout the year, and a schedule is printed in the alumni publication, *Insight*.

Computer Center

The university Computer Center provides a state-of-the-art facility to both academic and administrative functions at the university. It maintains three independent processing units, each accessible from any given terminal via a network processor capable of polling for ports, both direct-connect or dial-up.

Further, three of the CPU's are networked together via XODIAC (a Data General network support system). The center also supports six micro-computers: 1) three Radio Shack TRS-80's, two Apple II's (one with a graphics tablet), and Atari 800.

The administrative computer is the Data General MV/8000—Eclipse line. It is a 32-bit processor with 3 megabytes of physical memory and a virtual address range of 4 gigabytes. The operating system is AOS/VS and is capable of handling up to 255 concurrent processes. All data entry is made via VDT's (video display terminals); the maximum number of ports that can be attached to the processor is 128. Presently, 32 ports have been installed. Other peripherals are 2 disk drives (one 147-megabyte and one 600-megabyte with dual porting capabilities), 1 dual density magnetic tape drive and one 600-line-per-minute printer. In addition to the typical administrative functions, word processing is also supported.

The academic facility's primary computers are the Data General MV/8000 and the S/140. Both are the Eclipse line. The MV/8000 is a 32-bit processor with 10 megabytes of physical main memory and a virtual address range of 4 gigabytes. The CPU runs at 1.1 million instructions per second. The system has floating point hardware and functions in a multiprogramming/multitasking environment. The operating system is AOS/VS and is capable of handling 255 concurrent processes. Peripherals attached to the system are 4 disk drives (three 277-megabytes and one 147-megabytes), one 800/1600 bpi tape drive, one 600-line-per-minute printer, three 340-character-per-second printers, and one 180-character-per-second Decwriter printer. Several more printers can be attached if desired.

The system can support up to 128 terminals, and presently is utilizing 75 VDT's. Ten dial-up lines are available for portable terminal use. A full screen editor dramatically enhances program generation and, hence, throughput. All programming is interactive via the VDT's. Programs can be submitted to a batch stream if desired. This allows for continued use of terminals for other tasks or termination of session while the submitted job runs to completion.

Communications capabilities are superb in that networking (including such protocols as SNA, X.25, etc.) is or can be readily made available to the users.

Software support includes ANSI languages such as FORTRAN 77, COBOL, PL/1 RPG-II, BASIC (Extended), PASCAL and APL. A data-base file manager (INFOS), a SORT/MERGE package, a mathematical/statistical package (IMSL) are already available for users. The social science package, SPSS—Version 9.0, is up and running. Many other popular software packages will be made available as time allows or need dictates. Graphics packages and raster graphics terminals have been introduced into the computing curricula. Several RJE emulators are supported on the MV/8000, including RJE-80 (2780/3780) and HASP II. Word processing is also up and running.

The Data General S/140 is used to drive a MEGATEK vector refresh graphics unit. The MEGATEK has a 4096 x 4096 screen and supports KB entry, joy-stick, light-pen and tablet input. The graphics processor includes hard-wired 3-D, rotation/translation features which are activated through FORTRAN callable routines. The S/140 is a 16-bit processor, has a ½ megabyte main memory and supports up to 5 terminals as configured at present. Other peripherals are a tape drive, 24-megabyte hard disk (Winchester technology) and a floppy-disk—all Data General line compatible. The operating system is AOS and communicates with the MV/8000's through XODIAC, hence allowing the S/140 users to make use of the 32-bit compilers and processors when needed.

The microcomputers support BASIC in general; some support PASCAL and FORTRAN 77; the Atari supports a music composer, as well as the delightful game cartridges. All micros can become intelligent terminals to the networked systems. A Decwriter and an Epson are available as printers to any of the micros.

Counseling

Individual counseling is offered to students for personal problems, for marital and domestic problems and for study and career choice problems. Students can obtain assistance for educational, vocational and general life problems.

The center offers psychological testing including vocational interest, personality assessment and academic placement.

Dining

The Student Center includes three separate student dining areas. A snack bar and the Rathskeller are located on the main floor. A full-menu dining commons and meal plan dining room are located on the ground floor. Three meal plan options are offered. A plan, while highly recommended for all students, is required for students living in the dormitory and YMCA. Meal plan contracts are available by contacting the Housing Office. This service is curtailed when the undergraduate term is not in session.

Graduate Student Council

The Graduate Student Council is a forum where graduate students can provide input to the administration in order to improve all aspects of graduate education at the university. The council schedules a number of extracurricular activities, and all graduate students are encouraged to attend.

Handicapped Services

The Office of Handicapped Services provides guidance and assistance to students with physical handicaps. The office also coordinates the university's compliance with section 504 of the H.E.W. Rehabilitation Act of 1973. All inquiries and problems concerning barrier-free access to university facilities should be addressed to this office.

Housing

The Housing Office, located in the entry area of the dormitory, will assist graduate students in finding off-campus housing accommodations. The office is open from 8:30-4:30, Monday through Friday, for any student wishing to find housing accommodations. The office has listings for apartments, houses and private rooms.

International Students

Students from a number of countries are a part of the University of New Haven student body. The Office of International Student Affairs provides assistance in the following areas: all documentation pertaining to the Immigration and Naturalization Service; school transfers from and to UNH; orientation programs for international students; referral service for agencies that assist internationals; and the friendship family program.

Library

The Marvin K. Peterson Library, named in honor of the former president of the university, was opened in 1974. It has a capacity of 300,000 bound volumes. Adjoining the Main Building, it includes special collection rooms, a music room, archives and spacious reading and reference areas. Study is made convenient by modern research facilities and equipment including microreading stations and micro-reader-printers.

The library contains more than 300,000 volumes, 95,000 U.S. government documents, 10,000 record albums, numerous corporate annual reports, pamphlet files and microfilm. The library subscribes to 1,400 periodicals, and extensive back issue files are maintained.

The resources of both the New Haven and West Haven public libraries are available to students (non-residents must pay a fee). Under a reciprocal arrangement, University of New Haven students may borrow materials from the libraries of Albertus Magnus College or Quinnipiac College by presenting a valid UNH I.D. card.

Minority Student Affairs

The Office of Minority Affairs represents the needs and interests of minority students at the University of New Haven. The office works closely with minority students to ease the transition into the academic environment while enabling the student to maintain cultural pride and heritage. The office also promotes social and cultural activities which are of special interest to minority students.

Publications

Students publications include *The News*, the university student newspaper; *The Chariot*, the annual yearbook; and *The Noiseless Spider*, a literary publication. Students may volunteer their services on any of the student publications.

Veterans Affairs

Since the university has one of the largest veteran enrollments in Connecticut, an Office of Veterans Affairs with a full-time staff is maintained. In addition to processing applications for various V.A. benefits, the office provides a wide range of supportive services for veterans attending the university. Assistance is available in academic areas, and special help such as funding for tutorial assistance, readers for the blind and aid for the disabled is also available.

WNHU Radio

WNHU, the university's student-operated FM stereo broadcast facility, operates throughout the year on a frequency of 88.7 MHz at a power of 1,700 watts. This extracurricular activity, open to all university students, serves southern Connecticut with music, news and community affairs programming. Its sportscasters are the voice of University of New Haven Charger sport teams.

BOARD, ADMINISTRATION, AND FACULTY

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George E. Laursen, vice president-manufacturing, Health and Beauty Division, Chesebrough-Pond's, Inc.
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Timothy Mellon
Alexander W. Nicholson Jr., president, Statewide Insurance Corporation
Peter K. Orne, vice president and general manager, WTNH-TV
Herbert H. Pearce, *assistant secretary;* president, H. Pearce Company
Mrs. William F. Robinson Sr., Title IV consultant, State Department of Education

Fenmore R. Seton, president, Seton Name Plate Corporation
Leon J. Talalay
George R. Tiernan, *secretary;* attorney at law
Cheever Tyler, attorney at law
P. Takis Veliotis, vice president-marine and international, General Dynamics Corporation
Barton L. Weller, chairman of the board, Vitramon, Incorporated
F. Perry Wilson Jr., senior vice president, First Bank
Robert F. Wilson, president, Wallace Silversmiths, Inc.

Administration

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Alexis N. Sommers, B.M.E., M.S., Ph.D., Provost
John E. Benevento, B.S., M.S., Vice President for Administration
William S. DeMayo, B.S., M.B.A., Treasurer
Walter Jewell, A.B., Ph.D., Secretary to the University
James W. Uebelacker, B.A., M.A., Ph.D., Associate Provost
Marjorie Montague, B.S., Controller and Assistant Secretary to the University
Caroline A. Dinegar, B.A., M.A., Ph.D., Assistant Provost for Governmental Affairs
Joseph B. Chepaitis, A.B., M.A., Ph.D., Dean of the School of Arts and Sciences
Marilou McLaughlin, B.A., M.A., Ph.D., Dean of the School of Business
Konstantine C. Lambrakis, B.S.E.E., M.S.M.E., Ph.D., Dean of the School of Engineering
William S. Gere Jr., B.M.E., M.S.I.E., M.S., Ph.D., Dean of the Graduate School
Richard C. Morrison, A.B., M.S., Ph.D., Dean of the School of Professional Studies and Continuing Education

Faculty 1983-1984

Arnold, Joseph J., Associate Professor, Industrial Engineering
B.S., M.S., Southern Connecticut State College
Barratt, Carl, Assistant Professor, Physics
B.Sc., Bristol University, England; Ph.D., Cambridge University
Bechir, M. Hamdy, Professor, Civil Engineering
B.C.E., Cairo University; M.A.Sc., University of Toronto; Sc.D., Massachusetts Institute of Technology
Bodon, Jean, Assistant Professor, Communication
B.A., Birmingham Southern College; M.A., University of Alabama
Brody, Robert P., Associate Professor, Management and Marketing
B.A., Wesleyan University; M.B.A., University of Chicago; D.B.A., Harvard University
Carriuolo, Ralf E., Professor, Humanities
B.A., Yale University; M.M., Hartt College; Ph.D., Wesleyan University
Carson, George R., Associate Professor, Civil Engineering
B.C.E., City College, New York; M.S.C.E., Columbia University

Chandra, Satish, Professor, Accounting and Finance
B.A., University of Delhi; M.A., Delhi School of Economics; LL.B., Lucknow Law School, India; LL.M., J.S.D., Yale University

Chepaitis, Joseph B., Professor, History
A.B., Loyola College; M.A., Ph.D., Georgetown University

Chun, Kee W., Professor, Physics
A.B., University of Pennsylvania; A.M., Princeton University; Ph.D., University of Pennsylvania

Costello, Francis J., Associate Professor, Industrial Engineering
B.S.M.E., M.S.M.E., Newark College of Engineering

DeMayo, William S., Professor, Accounting and Finance
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Desio, Peter J., Professor, Chemistry
B.S., Boston College; Ph.D., University of New Hampshire

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Gaensslen, Robert E., Professor, Public Management
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Sandman, Joshua, Associate Professor, Political Science
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University of New Haven

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Complete both sides.

Graduate School application for admission

University of New Haven, West Haven, CT 06516

Instructions for applicants:

This application must be filled out and returned to the Graduate School, University of New Haven, West Haven, Connecticut 06516, along with:

1. A $20 nonrefundable application fee. This application cannot be processed unless accompanied by the fee.
2. Official transcripts forwarded by all colleges previously attended.
3. Two letters of recommendation. (Recommendation forms are attached)

Today's Date _____

☐ Mr.
Legal Name ☐ Ms. _____
Last First Middle

Names different from above that may appear on academic records _____

Permanent Address _____ _____ Telephone No. ( ) _____
Street Apt. # Area Code

_____
City or Post Office State Zip Code

Mailing Address (if different from above) _____
Street Apt. # City or Post Office State Zip Code

Birth Date _____ Social Security No. _____

Please indicate the program for which you are applying: _____

If you desire a concentration within that program of study, please indicate: _____

Where do you plan to attend most of your classes?

☐ at the West Haven campus? ☐ at an off campus center? Specify:

☐ Groton/New London ☐ Trumbull
☐ Danbury ☐ Middletown
☐ Clinton ☐ Waterbury
☐ Wallingford

Do you plan to study ☐ part time or ☐ full time?

Indicate the trimester you intend to start graduate study.

☐ September, 19___ ☐ January, 19___ ☐ April, 19___ ☐ Summer, 19___

Will you be applying for a student loan? ☐ Yes ☐ No

How did you learn about UNH? ☐ Radio ☐ Newspaper Ad ☐ TV Commercial ☐ Direct Mail
☐ Friend ☐ School Guide ☐ Off-campus Coordinator ☐ College Fair ☐ Other _____

please turn over

Scholastic Record

List in chronological order all colleges and universities attended.

Name of School	Location	Attendance From — To	Date of Graduation	Degree	Major Program

Employment Record

List in chronological order all employment from present position to include the past five years.

Position Held	Date	Name of Employer	Location	Telephone No.

References

Name	Title	Organization

Citizenship

Are you a citizen of the U.S.? ☐ YES ☐ NO (Country of citizenship) _____)

If answer is no,

1. What is your visa classification? _____
2. Indicate date TOEFL (Test of English as a Foreign Language) examination was taken and remit scores with application

Date _____ Place _____ Scores _____

Certificate To Be Signed By Applicant

The information supplied on this application is complete and true to the best of my knowledge. All materials and supporting records submitted by me or on my behalf in connection with this application or my attendance will not be released to anyone other than authorized university personnel without my consent.

It is understood that incorrect or falsified information will be grounds for disapproval of this application or dismissal from the university. The undersigned agree(s) to pay all financial obligations if admitted to and attending the university, including obligations incurred if financial aid is terminated, reduced or postponed for any reason.

The undersigned also authorize(s) the Office of Public Relations of the university to publish the applicant's picture, address, major, honors, sports or other activities for public relations purposes should the applicant decide to attend the university in any capacity. This publicity authorization may be rescinded by notifying the Office of Public Relations in writing within 30 calendar days of admission to the university.

Applicant's Signature _____ Date _____

The University of New Haven does not discriminate in admission or employment on the basis of sex, race, religion, age, national origin, or physical handicap. An equal opportunity affirmative action institution.

University of New Haven

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Complete both sides.

RECOMMENDATION FORM

Please Expedite

To be completed and returned directly to:

UNIVERSITY OF NEW HAVEN GRADUATE SCHOOL
ADMISSIONS SECRETARY
WEST HAVEN, CONNECTICUT 06516

Name of applicant _____ Undergraduate college _____

Program to which applicant is applying _____

TO THE RESPONDENT: The above-named person has applied for admission to the Graduate School of the University of New Haven. Please provide us with your estimate of the qualifications of this candidate and of the reasonableness of his or her academic goals. It will help us if you indicate how long and in what capacity you have been acquainted with the candidate. If possible, compare his or her competence, motivation and intellectual ability with others you have known with similar goals. A candid, thoughtful statement, free of exaggeration will be most useful to us. Please use reverse side of this sheet when necessary.

In conformity with the Family Educational Rights and Privacy Act of 1974 we cannot regard letters of recommendation as confidential unless students waive their right to inspect such letters. If you wish the school to keep this information confidential, please have the applicant sign the waiver on the back of this page.

please turn over

Recommendation, cont'd.

I: ☐ recommend strongly ☐ recommend ☐ recommend with reservation

☐ do not recommend this candidate for graduate study at the University of New Haven.

Name _____

Position _____

Address _____

Date _____

Signature _____

Since the applicant expects your response to be considered as part of his/her application, we plan to defer action on the application until hearing from you.

Thank you for your assistance.

WAIVER

I hereby waive my right to inspect any letters of recommendation written to the University of New Haven Graduate School on my behalf by _____.

(Applicant's Signature) _____

University of New Haven

Please Print or Type.
Complete both sides.

Please Expedite

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(Applicant's Signature) _____

Transcript Request Sheet. To be filled out and mailed directly to the school or schools from which transcripts are requested. This form may be photocopied as necessary. Most schools charge from one to two dollars for this service. Again, under the Family Rights and Privacy Act, this form must be signed before it is sent.

Request for college transcript.

I approve the release of an official copy of my transcript to the University of New Haven.

Signature _____ Date _____

TO: Registrar

name of college or university _____

address _____

Please send an official transcript of my work to:

Dean of the Graduate School
University of New Haven
West Haven, CT 06516

Name _____

Date of Birth _____

Date of Graduation _____

Years attended _____

Current address _____

Transcript Request Sheet. To be filled out and mailed directly to the school or schools from which transcripts are requested. This form may be photocopied as necessary. Most schools charge from one to two dollars for this service. Again, under the Family Rights and Privacy Act, this form must be signed before it is sent.

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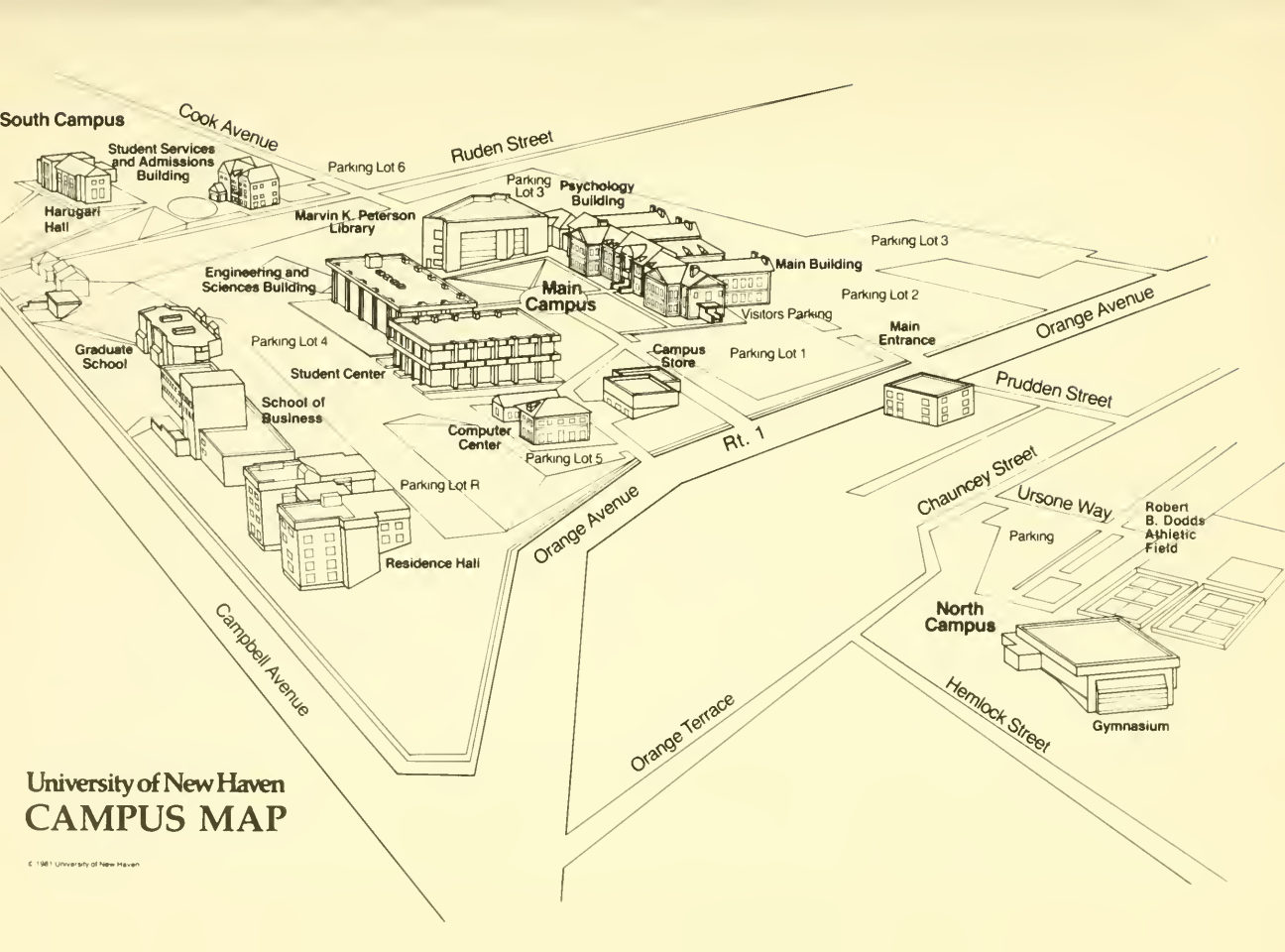

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